

PLOT CONSOLIDATION IN SITES AND SERVICES PROJECTS:

A case study of Bauchi Project

By

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DEDICATION

This Work is dedicated to my late grandmother Khadijatu Yaya who did not live long enough to see its completion. (May Allah make her among the permanent dwellers of paradise - Ameen).

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ABBREVIATIONS

UN	United Nation
UNCHS	United Nations Centre for Human Settlements
NISER	Nigerian Institute for Social and Economic Research
SPSS	Statistical Package for Social Sciences
NSUDP	Nigerian States Urban Development Projects
FMWH	Federal Ministry of Works and Housing
BSUDB	Bauchi State Urban Development Board
DPC	Damp Proof Course
PIU	Project Implementation Unit

SYNOPSIS

This study sets out to find the reasons why the level of consolidation by the target beneficiaries of the World Bank assisted Sites and Services project in Makama Bauchi was low.

The World Bank assisted Sites and Services strategy is one of the more recent public sector solutions to the low income housing problems adopted by many countries of the Developing World in the last two decades. The World Bank assisted Projects normally take two approaches: (1) Sites and Services where land is provided with physical infrastructure (e.g. roads, electricity and water supply) and community facilities (e.g. schools, health clinics), and divided into individual plots and allocated to specified target groups who are expected to build their houses through self-help, and live in them. (2) Settlement Upgrading where physical infrastructure is provided in an already existing settlement and land ownership are legalised where they were illegal, improvements of individual dwellings is expected to follow. With both approaches, the guiding principles are those of affordability, cost recovery and replicability

The Nigerian Government had adopted this strategy since the late seventies. Two pilot projects have so far been planned and executed. One in Bauchi Town (Bauchi state) and the other in Imo (Owerri state). The Bauchi project, which is the more mature of the two projects, was chosen as a case study in this research. The focus of this study is on the Sites and Services component whose major objective was to ensure house ownership by low income groups through this strategy thereby increasing substantially the housing stock for these groups.

In the Bauchi Sites and Services project, 80% of the plots were to be allocated to the low income group who qualified by reason as the criteria laid down, while the remaining 20% went to a higher income group. The plot allottees were expected to consolidate their plots by building a completed basic

unit within two years of allocation. A minimum basic unit of two rooms and a parlour built with a combination of imported and local, but permanent, building materials was required in the first instance and expansion could take place when and if resources were available.

However evidence of what actually happened in the project, revealed in the progress report, tells a different story. Though it was reported that by 1987, when this project was declared completed, nearly all demarcated plots were allocated to prospective beneficiaries, an assessment of the consolidation showed the level to be lower than expected. Furthermore a survey of the completed houses revealed that those owned by the target lower income beneficiaries were smaller in number than those owned by a higher income non-target group despite the initial plot allocation being the other way round. This means the level of plot consolidation by the original target group is lower than expected. This study will therefore attempt to find the reasons *Why the level of plot consolidation by the target allottees was lower than expected.* In order to find the reasons, some hypotheses were put forward and tested. *The key hypothesis is that the problem is caused by the inaccurate estimates and assumptions made by the project planners regarding the housing affordability, needs and preferences of the target beneficiaries of the project.*

To get the required information to test this hypothesis, a field survey was conducted between December 1991 and May 1992. The data were analysed using the SPSS/PC+ (Statistical Package for Social Sciences). The results of the data analysis showed that there is a mismatch between the cost of building according to the standards required by the project and what the target beneficiaries could afford. This mismatch was attributed to the project's requirement to use high priced building materials, cost of hired labour which it had been assumed would be free, the absence of assumed savings and non-project borrowing sources to supplement project loan.. Another factor revealed by the analysis was the mismatch between the size of the recommended basic unit and that which the beneficiaries require. The number of rooms in the recommended basic unit was far short of beneficiaries requirements. As a

result, many target plot allottees either did not consolidate or could not finish the houses they started. Hence consolidation remains low in the project. Also further analysis has shown that the target beneficiaries who have not consolidated are worse off in terms of their current housing situations. This situation will remain the same indefinitely unless some measures are taken to revert it.

It is therefore hoped that the findings of this study, and the suggestions made based on the findings, will contribute towards a permanent solution to this problem in the Makama project and in similar projects in Nigeria and elsewhere in the Developing World.

CHAPTER 1: INTRODUCTION

1.0 Introduction

The main purpose of this chapter is to introduce the study by briefly discussing the research problem, outlining the study framework and summarising its methodology. The chapter is divided into six sections. The first section covers the research problem, its statement, nature, extent, and consequences, the second section is the background to the research problem, beginning by tracing the low income housing problem in the developing countries with reference to Nigeria in particular and moving on to discuss the Nigerian government's earlier response to the problems, why they have failed and the need to adopt the World Bank aided Sites and Services strategy; the third section outlines the study framework, starting by stating the purpose of the study followed by the research question, hypothesis and objectives; the fourth section is a brief summary of the research methodology ; the fifth outlines the organisation of the thesis report with a brief summary of the content of each of the remaining chapters of the thesis; the last section contains summary and conclusion.

1.1 Statement of research problem

The main problem this study addresses is the low level of plot consolidation by the target beneficiaries of the World Bank aided Makama Sites and Services housing project in Bauchi, Nigeria. For the better understanding and appreciation of the problem, its nature, extent and consequences are discussed in the following subsections.

1.1.1 Nature of the problem

To understand the nature of the problem, it is very necessary to understand the concepts of the key words in the problem statement. The key words which appear to underpin the problem include: housing, self-help and aided self-help housing, sites and services, settlement upgrading, target group and consolidation.

The term **housing** means both a dwelling stock (a noun) and the process by which the stock is created (verb) (Turner 1976). In the past most housing policy makers tended to define housing as a noun or a product and were more concerned about its physical qualities, and hence policy responses to housing problems were largely influenced by this definition. According to them, a useful and decent house is that which satisfied certain officially determined standards of construction. So both government and privately provided houses must satisfy this definition.

In the more recent years however, this definition was seriously challenged by a number of housing experts. Turner (1972: 158) for instance, after a series of studies on housing came up with the conclusion that the definition of housing as a product tends to put more emphasis on the physical quality of the house and neglect its user values. In his studies, Turner found that, for most people, what a house does is as important as what it is. He went on to say that housing problems should be restated in terms of the human values that must be placed on the housing process, only then can a reasonable interpretation, and feasible and desirable actions be indicated. This argument has contributed to the recognition acceptance and encouragement of self-help housing. Vershure (1989) also argues that housing is more than just a mere product, it is a complicated and unique phenomenon, being a shelter, a symbolic act and a service, a process by which people all over the world express themselves. For the purpose of this study the definition of housing as a product as well as a process which is particularly relevant in describing the Sites Services housing strategy is adopted.

Self-help housing, the origin of the idea of Sites and Services, is defined as the use of ones own efforts to build a house for oneself and ones family. While self-help housing settlements are defined by many authorities in Developing Countries as illegal, spontaneous, undesirable developments or slums, for people like J.F.C. Turner the story is different. He defines self-help housing as a Self organised, Self built and managed housing development. Although self-help housing is a very old concept, the role played by families in the contemporary self-help differs. While, traditionally self-help housing put more emphasis on the use of free family labour to gather and assemble materials and build a house, the

contemporary version of self-help is about decision making and control by families in housing investment. The result of the contemporary self-help efforts range from squatter settlements to well established and standards neighbourhood (Rodell and Skinner 1983).

Aided self-help housing refers to some form of assistance given to households who are involved in the process of self-help housing. Normally this assistance comes from the authorities, aid organisations and financial institutions. The idea of aided self-help housing emerged as a result of the observation that the conventional housing provided in the 1950s and 1960s in the majority of the Developing Countries was not affordable by the poor (Swan 1983), and that the poor do make tremendous efforts to provide their own houses, most of which are classed as squatter settlements and slums. It was also reported that many of the poor do not invest in slum dwellings up to desired standards for fear of being relocated or lack of essential services and not mainly as a result of poverty (Turner 1972).

Turner (1966,1972), Abrams 1964 and 1971 Venez 1974 have reported that the replacement of slum dwellings with conventional housing has failed to meet low income housing needs. Slums dwellings, Turner (1972) argues, are an expression of the desire and ability of the low income to provide for themselves. If these energies and efforts are harnessed with some investment on the part of the authorities, a lot more could be achieved with far less investment than that required by conventional housing.

Rodell 1983, voiced the same opinion when he pointed out that "Governments can develop between two to five Sites and Services plots with the resources needed to build a single house in the conventional housing project.

So the basic message behind aided self-help, is for the government to help poor families make up the shortfalls in their efforts to provide for themselves. It was agreed by a number of experts (Turner 1972, Swan et al 1983 Laquian 1983, Rodell J and Skinner J 1983 etc.) that if government efforts and those of households, are put together, more could be achieved. Furthermore, government could reduce their investment per family and so reach a larger number.

The other important issue addressed by aided self-help is the redress of the balance of power and control in housing investment decision making between authorities and the recipient. Traditionally the authorities, or government, had total power in planning and providing housing. With aided self-help, the authorities are to play a supportive role, while the major power and decision making should be left in the hands of the community. This new idea was psychologically not an easy one for the housing professionals and bureaucrats to deal with. The idea of allowing the poor to take legal responsibilities for building and maintaining their own houses did not appeal to them for fear of being made redundant and losing the control and power which they have been accustomed to. However as Swan (1983) have written, these fears are unfounded because the professionals and bureaucrats will still have "an important role to play in terms of planning for and supporting the efforts of the poor in housing and infrastructure." He went on to argue that the professionals also have many physical, social, as well as economic issues in the housing environment on which to redirect their efforts. For instance, a lot of work still needs to be done in terms of research, new innovations and control to resolve the issues surrounding land.

The sites and services and Settlement upgrading which the World Bank has adopted in the last two decades, are both approaches of aided self-help housing strategy.

Sites and Services is a form of aided self-help housing strategy where a variety of projects initiated and designed on newly acquired land are meant to provide serviced plots for housing for a low income target group. The level of services provided depends on the local circumstance ranging from minimally serviced plots to an intermediate level and a maximum level, of core units complete with full access to community based services (Mayo and Gross 1987). The sites and services projects are normally undertaken by authorities and housing agents. This approach is a shift of housing policy focus from providing a finished house to providing serviced plots for self-help housing.

Settlement upgrading is another form of aided self-help where authorities take the initiative in the extension of essential services and community facilities to

an old settlement, legalising the land holdings where they are illegal. This in some cases, also includes provision of assistance for house improvements in the form of loans to a household.

This study is, however, more concerned with the sites and services component of the World Bank Aided Projects where serviced plots are allocated to a target beneficiary group who are expected to consolidate the plot fully through self-help efforts.

Target beneficiaries of the Sites and Services projects are a low income group to whom the benefit of the projects were directed . The definition of the low income group however, varies from country to country. In the Makama project in Nigeria, the group was defined as those earning between 104 to 282 Naira (\$150-\$320 at 1978 rate of exchange) per month in 1978 when the projects were planned. However in recent years, due to the deep economic recession and inflation in the country, the low income group definition has been revised to include all those earning 500 Naira and below in the low income category (National Housing Policy 1991). **Consolidation** refers to the process by which families allocated plots on the sites and services sites progressively develop them over a period of time (Laquian 1984). Though progressive development here means a gradual process of consolidation which could take many years, a minimum consolidation level at which households could move in while the process proceeds is expected over a definite period in most projects. In the Makama sites and services projects a minimum built up unit, which the plot allottees were expected to achieve within two years of plot allocation, was defined by the project planners as a basic unit. The unit specified is of two bedrooms and a parlour, with a service core comprising of kitchen and toilet. It is to be built of concrete foundations, concrete block /burnt bricks walls, and timber/azara roof with a corrugated zinc/iron sheets cover. It was the minimum acceptable consolidated unit. However, anyone who wished to build bigger units was allowed to do so if they could afford it.

The term **plot allottees** refers to all the households who were allocated plots on the project site for the purpose of building houses.

Low level of consolidation is used here to mean that the amount of houses completed to the minimum accepted standards is below that which is expected at the time of measurement. The full level of consolidation expected is 100% of the total plots allocated. Therefore a figure below this is lower than expected. The extent of how low is determined by how close or far from the full level, the actual level is.

1.1.2 Extent of problem

The plot allocation process in the Makama project started in 1983, by the end of 1985, according to the project progress report (World Bank inspection mission 1985), a total of 1,174 plots representing 60 per cent of the total serviced plots, were allocated to the beneficiaries and certificates of occupancy issued. The project was declared officially completed in 1987, when all serviced residential plots were allocated and the World Bank disbursed all its loans. By 1988, a year later, a survey of the project revealed that only 483 plots were consolidated out of the total 2000 plots allocated Project Implementation Unit (1988) reports. The survey also revealed that another 471 were at various stages of construction but a majority of them looked abandoned. Onibokun also reported that during his study of the following year (1989) his team counted up to 400 started buildings which appear to have been abandoned. The most recent survey of the project (1992) by this study reveals that only 60 per cent of the total 2099 plots allocated have been fully consolidated. Although this is an increase over the earlier reports, it is still far below expectations which were for 100% consolidation. Furthermore, a breakdown of income categories of the owners of the completed house revealed that less than 20% came from the target group. This further demonstrates the magnitude of the problems for the target group with whom this study is concerned. More detailed analysis of the extent of the problem is provided in chapter three - the case study chapter.

1.1.3 Consequences of the problem

The following are some of the consequences of the low level of consolidation in the Makama sites and services project.

- i) The empty plots which have not been consolidated are being used as dumping grounds for solid waste in most of the neighbourhoods, providing breeding grounds for flies and mosquitoes.
- ii) The abandoned buildings, especially those at lintel or roofing level, make good hide-outs for thieves, and cause major security problems for the whole area.
- iii) Illegal sales of plots and uncompleted buildings have become common place. Some households who are unable to consolidate are persuaded to sell their plots usually to higher income earners. Some sell to repay their mortgage loan, the interest on which keeps rising, without realising any benefit from it.
- iv) Many households are experiencing increased economic hardship due to their failure to consolidate. For instance most of them have to pay mortgage loan instalments and at the same time meet their rent obligation in their current housing every month from their meagre earnings. The little they are left with is not enough to buy food for the family hence malnutrition may result. Investigations of their current housing situations (presented in Chapter 7) also revealed that they are living in worse housing situations than those living in project houses. They pay higher rent for lower quality houses.
- v) The lack of consolidation by some households has made the project unit take some drastic measures to the disadvantage of the lower income groups. These measures include, the enforcement of one of the conditions governing the allocation of plots which is that any one who is allocated a plot and fails to start consolidation within two years, shall have his ownership revoked and the plot is allocated to someone else. Most of the plots revoked have been reallocated to a higher income group. Also, the Mortgage Bank stopped the policy of automatic issuance of a loan with plot allocation. The plot allottee is required to complete the foundation of his buildings using his own resources before he qualifies for the initial loan instalment and subsequent instalments depended on his progress. This was with the pretext that low income participants were diverting the loan to

uses other than consolidation. This meant that the low income allottees who do not have the resources to start building do not qualify for the project loan and therefore will not be able to consolidate. They are left with the option of selling out their plots to a higher income household or waiting for project authorities to revoke their allocations. The consequence of this is that the original plot allottees, who are the legitimate target groups for the projects, are gradually being edged out of the project.

This is made obvious by the records which show a reduction in the proportion of the target income group over the years. The project records of 1985 for instance showed that 80% of the plot allottees were within the specified income group. By 1988 a survey of consolidated plots revealed only 47% (PIU 1988) of the houses belonged to those within the bracket, and by the following year (1989) the percentage had fallen to 38 (Onibokun 1989). By the time this survey was conducted, the proportion of the legitimate target group was only 20%.

vi) The low level of consolidation by the target group means that one of the major objectives of the project, which is to significantly increase the housing stock owned by the low income groups, would not be achieved.

1.2 Background of problem

The background of the research problem can be traced back to the low-income housing problems in the Developing Countries, and in Nigeria in particular.

The housing problems in Nigeria, and government intervention have been well documented (Onibokun, 1982; Adeniyi, 1972; Abiodun, 1976; Awotona, 1990; Mabogunje, 1982; Abrams; 1966 Kobe; Koenigsberger, Wheeler, 1980).

1.2.1 Housing Problems in Developing Countries.

The housing problem is a Universal issue. There is not a single major city in the World that is devoid of housing problems (Wallace 1971). This is irrespective of whether the country is in the developed or developing world. However a major difference does exist between the problem in the developed and the developing world. While in the former the problems are being progressively and successfully dealt with by effective policies, in the latter, problems are getting

worse. Patton (1988), for instance, has noted that while people in the developed countries are living in better housing conditions now than they were at the turn of the century, in developing countries people are, in worse housing conditions now. The UNCHS 1981 also reported that the housing situation in the developing countries has been getting progressively worse over the last two decades.

It was estimated that between 1/5 and 1/2 of the urban population of the developing countries live in makeshift and substandard housing and that 1/2 a billion housing units are needed by the end of this century to meet the housing need of the Developing Countries (UNCHS 1982:2 UN 1976).

The housing shortage in the Developing Countries in the past three decades has been mainly attributed to a combination of factors mostly stemming from the urbanisation process.

The rapid population explosion in the cities resulting from massive rural/urban migration, and improved medication leading to low death rates and improved fertility, are some of the major causes of the housing problems which many Writers including Dwyer 1978, Hauser and Gardener 1982 have pointed out. The problem is further compounded by the low purchasing power of both the governments as well as individual making them lack the ability to provide adequate shelter and services to cater for the ever rising demand (Dwyer 1975; Payne 1977, 984 Ross 1973; Ward 1982; Hardoy and Satterthwaite 1981). The World Bank estimated in 1980 that over 2000 million people in the Developing Countries are living below the poverty line.

The immediate consequences of these problems are the growth of illegal substandard housing settlements in most major cities of the developing countries. For instance, Most South American cities are characterised by 'favelors', 'rancheros' and 'villas miserias'. These are settlements which grew spontaneously as people attempted to house themselves. Most of them were built on illegally occupied public spaces and are constructed of temporary materials with very minimal or no basic services and sanitation. While the UN (1960)

estimated that 10 housing units per 1000 of the population must be built every year to satisfy the demand by the end of the century the actual rate was only rate of production was only 3/1000 (Mabogunje, Hardoy and Misra 1974).

The situation in Asian countries is not much different. For instance in major Indian cities like Calcutta, Delhi, Bombay and Madras, over 65% of the families were reported to be living in a one roomed unit or even sharing with other families, with an average person per room varying between 2.9 and 3.7 (Dwyer 1981: 105).

The United Nations estimates show that the dwelling deficit for Asia is a total of 147 million out of which 22 million is urban and 125 in rural.

In African countries, the problems are similar, but certain factors are thought to have compounded their magnitude and nature. These factors include extremely low average income and the wide gap between the rich and poor, multiplicity of culture and the imposition of foreign building codes and standards (Mabogunje, Hardoy and Misra 1978). This unfortunate circumstance has led to the growth of poor quality housing manifested by overcrowding, poor sanitation and inadequate infrastructure and services as Okpala (1986 : 206) has rightly put it.

It is very important to note here that though some of the figures given regarding the magnitude of the housing problems may seem obsolete because of dates when they were compiled, they are still very relevant today. This is because the situation has only got worse over the decades and not improved. The United Nations (1987) has also pointed out that the housing problems in most developing countries particularly in Africa are getting worse due to the increasing impact of the cause of the problems, one example is that the rate of population growth in urban centres is still increasing and the purchasing power of both individuals and governments is diminishing with a worsening economic situation characterised by swelling debts and high inflation rates.

Nigeria, the nature and extent of whose housing problems are examined in greater detail, is not an exception to this phenomenon.

1.2.2 The nature and extent of low income housing problems in Nigeria

Housing problems in Nigeria like in most other developing countries are essentially urban as many observers (Awotona 1988, National Housing Policy 1991) have reported. Nigeria being the largest country in Africa with a population one fifth of that of the whole of African, has enormous housing problems commensurate to its size. The magnitude and nature of the problem also exhibit marked regional differences. In most urban centres, the problem is not only of quantity but also quality (National Housing Policy 1991).

Like all other cities of the developing countries, Nigeria's major cities have grown rapidly in the past three decades; so much so that all efforts towards housing the populace are outstripped by the demand. Between 1952 and 1963, Nigerian urban centres had an average growth rate of 5 % While Lagos had 8.6% during the same period, but by 1970, metropolitan Lagos was estimated to be growing at 13.5% annually (FMWH 1991).

This problem is manifested by overcrowding, growth of squatter settlements, inadequacy of infrastructure and services and generally poor housing environment, high cost of building as well as high rented accommodation. This is worse in the southern part of the country where land is a major problem and its legal acquisition is beyond most people.

D) Over crowding and poor quality housing

In Lagos for instance, the average number of persons per room is 4, and 74% of households occupy single room units. In some areas like Ajagunle and parts of Surulere, the situation is worsen by substandard houses and absence of basic facilities and sanitation (Adegunleye 1988; Tettey 1988 : 55-57). Exposed gutters and dumps of solid waste are a common sight. In some areas rooms are used as shops in the day and sleeping place for a family at night. All other conveniences are undertaken outside the house. However, in the Northern part of the country, there is a slight difference in the nature of the problem because the cities are less congested, land is still easier to acquire and rural-urban migration has less impact.

Although house sharing in traditional cities like Zaria, Kano, Bauchi and Yola is very common, overcrowding in real terms is not a major problem. This is because most traditional houses are the compound type with lots of space and courtyards which are also used for many activities including sleeping, cooking and washing (Dar al Handersah 1978).

Unlike in most South American and Asian cities, land invasion is less commonly practised in Nigeria. Apart from a few isolated cases in Lagos, where the practice becomes inevitable due to the high rate of rural-urban migration especially during the oil boom era of the seventies. Land invasion is generally less common in Africa (Gilbert, and Gugler 1982: 4).

In most traditional towns particularly in the northern part of Nigeria, land invasion is totally non-existent. Though so-called substandard houses exist, they are not in the form of squatter or illegal settlements but rather traditional settlements, that are badly adapted to the modern urban planning. Most of them were built by self-help or by a traditional master builder, with local materials, on traditionally purchased or inherited land long before modern planning was introduced in the areas. Some of them, because of the nature of materials used and lack of constant maintenance, have deteriorated over the years to become slums and constitute a problem to the inhabitants.

ii) Inadequacy of infrastructure and services

In Nigeria many cities and villages are not adequately provided with essential services and infrastructure. While in the urban cities the problem is that of inadequacy, in most villages, it is that of total absence. Facilities like good roads, electricity and portable water supply and proper sanitation are not provided at all in many rural villages. However in the major urban centres of Lagos, Kano, Ibadan and Kaduna on the other hand, facilities extend to nearly all parts of the city, which is one of the major attractions of the city to the villagers. But because of rapid population growth and a resulting lack of expansion of the facilities, these have become over-stretched and therefore inadequate.

A survey of the availability of electricity, water supply and sanitation facilities has shown that they vary considerably. For instance generally people have better

access to electricity (average of 83.1%) than tap water supply (74.8%) and sanitation (53.9%) (Adeakun & Onibokun 1990: 89-140). Also the more metropolitan southern states are better served with facilities than the less developed northern states. While in the south, Anambra, Bendel Lagos and Ondo states are served nearly 100% (Average of 97%) with electricity, in the north, states like Bauchi, Adamawa, Kaduna and Borno are served with electricity only 75.6%, 71.6%, 65.6% and 63.6% respectively.

The access to tap water is similar. While Anambra, Bendel and Rivers states have 99.3% ,95 % and 98 % such access respectively, 48.7 % of houses in Bauchi, 41.4% in Benue, and 41.5 % in Kano draw their water from wells (Adeakun and Onibokun 1990). Also only 35.2% of urban houses in Nigeria use flush toilets, the rest use either an earth pit or pail . Similarly the average for the South is higher than the North.

iii) High cost of building relative to incomes

The cost of building houses relative to incomes is a major compounding factor to the Nigerian housing problems. The cost of all the major inputs/components for housing such as materials, land and labour is beyond the reach of the ordinary citizen in Nigeria today. Inflation which has led to the continuous rise in prices, is a major factor. A bag of cement which cost 86 kobo in 1968 rose to 7.5 Naira by 1978, 25 by 1982 and by 1988 it had risen to 73 Naira and in 1992 cost over 100 Naira. Other materials also rose in prices at the same rate or even higher. Consequently, the cost of building rose accordingly. It is important to note that rises in income in this period were almost negligible compared to the cost of housing. For instance a low income earner who was paid 125 Naira in the civil service in 1974 was only earning 250 Naira a decade later (100% rise only). When this is compared to the 600% rise in cost of building over the same period, the extent of the gap becomes very clear. Onibokun reported that during the decade between 1975 and 1985, rents increased by almost 200 per cent in most areas of the country. This means that the poor can neither afford to build nor rent a decent house.

1.2.3 Nigerian government responses to housing problems

The Nigerian Government's earlier response to housing problems involved two main strategies. First was the Clearance of slums and substandard houses and the second, the provision of subsidised new houses to government employees. The magnitude of the response varied according to the particular period over the last three decades. This is because the country has had several government changes since independence, and each government had different commitments and hence different levels of investment in housing.

In the most recent government document on housing, the National Housing Policy (1991), past government responses are classified under the following periods: the Colonial period, being the pre-independence (pre- 1960); the two post independence decades i.e. 1960 to 1979; the second civilian Administration between 1979 and 1983; the present military era from 1984 to date.

i) The colonial period (Before 1960)

During this period, the colonial government's activities in housing were limited to providing staff quarters for colonial masters and specialised indigenous workers like police and railway staff (National Housing Policy 1991: 2). These were only provided in large cities like Ibadan, Lagos, Kano, Enugu and PortHarcourt (Fadahunsi 1980: 112).

In addition to this, various other programmes of land clearance and reclamation were undertaken in Apapa, Yaba and Otto Awa, some of which land was to be used for more housing development. In 1955 when the country was only five years away from attainment of independence, the central Lagos clearance and resettlement schemes were initiated to prepare the town for the big event (Fadahunsi 1980 : 114). Hence the temporary resettlement housing units in Surulere were built and remained permanent to date. It is important to note that only a few of those displaced by the clearance schemes were rehoused, the majority moved to other locations and created new slums (Fadahunsi 1990).

Also there were various moves towards facilitating the housing finance. In 1956, the Nigerian Building Society was established to make housing loans available to prospective builders. In 1959, housing corporations were established in the

different regions of the country, charged with the responsibility for high class residential schemes. Also state housing corporations were established by the regional governments following the creation of states. The state housing corporations were responsible for the nuclei of modern housing estates in all parts of Nigeria (National Housing Policy 1991). Some examples of these include the Northern Nigerian Housing Corporation estates in Kaduna and Zaria.

ii) The post independence period (1960- 1979)

The period after independence saw the introduction of the five yearly National Development Plans. Housing development had however suffered almost total neglect in the first two development plans (National Housing Policy 1991). Housing did not have any place or separate budget, and was merely mentioned under the Town and Country Planning section. The rapid urbanisation process during this period, coupled with the aftermath of the civil war (1957) has further led to the deterioration of housing condition in the major cities of Nigeria. In response, the Federal Government initiated the first National Housing programme in 1972 and proposed to build 59,000 housing units; 15,000 in the Lagos and 4,000 in each of the other states (NHP 1991). To this effect, the Federal Housing Authority was created in 1973 to co-ordinate the programme. In the third National Development Plan (1975-1980), government commitment to housing increased. For the first time, it came to accept housing as part of its social responsibilities towards all Nigerians (NHP 1991: 3).

The following table reveals the overall budget for housing and planning during the plan periods of 1970-1974 and 1975-1980.

Table1.1 Nigerian Government Planned Expenditure on Housing and Planning

Development Plan Period	Amount in the development plan (Naira)	Amount allocated to housing & planning	% of budget allocated to housing & planning
1970-1974	3 billion	0.038 billion	1.26
1975-1980	43 billion	1.5 billion	3.49

Source: Adapted from Housing In Nigeria edited by Onibokun P.(1985)

During the plan period of 1975-80, the Nigerian Government's financial strength increased with the increase in oil revenue, hence a further 2.6 billion Naira was earmarked for a gigantic nation-wide housing programme. This was to provide 200,000 housing units 50,000 in Lagos and 8,000 in each of the remaining states. Also in 1975, a Federal Ministry of Housing, was created and charged with the responsibilities of initiating and co-ordinating housing policies and related matters.

In 1976, the former Nigerian Building Society was converted to the Federal Mortgage Bank with an initial capital of 20 million Naira, later expanded to 150 million in 1979 (NHP 1991). In addition to these moves from the federal Government, the various state governments were also involved in provision of housing (Awotona 1990). Again Lagos state was reported to have made the greatest efforts in this regard. In most of the northern states, the popular state low-cost houses are a living example of the states' efforts.

In 1979, the military government handed over responsibility to a civilian Administration.

iii) The second civilian administration (1979-1983).

The civilian administration gave a higher priority to provision of housing which was one of their campaign slogans. By now housing was totally detached from

planning and had a budget of its own. In 1980, another nation-wide housing programme was embarked upon, but this time targeted directly at the low and medium income earners. It is important to note that for the first time, the low income group were being put first in the National Housing Programme. A total of 40,000 housing units were to be built annually, 2,000 in each state including the federal Capital Territory. Eighty percent (80%) of the units were to be one bedroom units intended for the low income group earning not more than 5,000 Naira (\$7,500 at the 1980 exchange rate) per annum and the remaining 20% two bedroom units for a middle income group earning not more than 8,000 Naira (\$12,000) per annum. A second phase of this scheme was also initiated to provide an additional 20,000 two bedroom units for the low income group. To this effect, the Civilian administration voted about 1.9 billion Naira (\$2.9 billion) for housing in the fourth National Development Plan for 1980-1985, out of which six hundred million would be used for implementation of the low-income housing scheme. The rest of the budget was to be used to provide staff housing loans for the high income group and the implementation of the Sites and Services low income housing projects in collaboration with the World Bank.

This civilian administration did not live long enough to witness the final outcome of their scheme as the military took over by a coup d'etat in 1984.

iv) The military period (1984 to present date)

This period, for most observers, was the era of the decline and final collapse of mass housing in Nigeria. The first military administration (1983-1985) encouraged the continuation of mass housing but at the state level with less involvement of the central government. However, on ousting the former regime in 1985, the present military administration put a total stop to what remained of the mass housing efforts in the country. The Housing Minister was reported to have said that, "the military administration could no longer afford the luxury of providing housing for Nigerians under the present economic crises" (Ogunshakin and Olayiwola 1992 : 46).

He added that the major focus of their administration would therefore shift from provision to assisting the hard-working Nigerians to provide their own housing by facilitating the major housing inputs of land, finance and building materials.

1.2.4 Why the earlier responses failed in Nigeria

The above review has made it clear that particularly in the decade between 1975 and 1985, the government of Nigeria had shown a tremendous commitment to housing and housing related matters. This commitment has been vindicated by the various housing programmes proposed and implemented with large amounts of finance expended. (e.g. 1.9 billion Naira between 1980 and 1985). There is no doubt these efforts have achieved much towards alleviating housing problems in Nigeria. However, there still remains a major concern among housing experts as to the effectiveness of these efforts. Awotona (1990), for instance, is of the opinion that the low income housing problems are still largely unsolved. Evaluations of these efforts by many Nigerian housing experts (Onibokun 1985,1990, Fadahunsi 1985, Agbola 1990 Awotona 1984,1987, 1990) have revealed that they were inadequate, and the strategy adopted was very ineffective in solving the housing problems. Furthermore, the low income group still remains largely uncatered for (Onibokun 1988). The failure of the strategies has been attributed to a number of factors some of which include the following:

i) Improper planning of Housing Programmes

Often housing programmes are not planned on the basis of estimates of shortfalls, therefore targets often fall far short of the needs of the population. Ozo (1990 : 41), for instance, reported that while it was estimated that during the plan period 1980-1985, Nigeria needed to produce 8-10 housing units per 1000 to meet the demand, the actual figure was 2-3 units.

This is partly because public housing projects include heavy subsidies which make it impossible financially for them to provide a substantial number of houses and achieve a wider coverage. Ultimately, it is the low income who do not get housed and the project end up subsidising for people who could afford the full cost.

Furthermore, even the targets announced are hardly achieved. For instance, the civilian administration's massive low income housing programme already discussed, achieved only 20% of its target, and less than 50% of this actually went to the intended group. These failures were attributed to factors which include, budget cuts by the government, corruption and mismanagement of the funds. Though large sums of money are announced in the budget allocated to housing, often only a small proportion is released. For instance out of the 3.6 million Naira budgeted for housing development in 1971/72, only half of it (1.8 million Naira) was actually spent (Awotona 1990 :18). Similarly in the following year only 2.2 out of 4.2 million Naira budgeted was spent. This coupled with delayed implementation leading to rises in prices of building materials, made it impossible for the stated targets to be achieved. Also, the award of contracts, particularly during the civilian regimes was heavily politicised. Contracts are awarded based on party loyalty rather than merit. Many of the contractors were more interested in maximising their profits and paid less attention to the standard of their work. They put up substandard units with weaker and cheaper foundations, some of which started collapsing before they were occupied. The roofs got blown off and walls cracked beyond habitability.

ii) The affordability problems.

The low income groups often can not afford the cost of building officially accepted standards of housing units. The cost of land, labour, building materials and infrastructure have soared and are beyond the majority of the low income. The Government low-cost housing schemes have been found not to be affordable by the low income (Onibokun 1985, Awotona 1990), for instance the Western Nigerian Housing Corporation provided only houses affordable to the middle and high income groups (Onibokun 1985). Similarly the states so called low-cost houses also turned out to be too costly for the low income. It is important to note that the housing affordability problems is not only limited to the low income but also the middle and high income. The majority of the middle income group can not afford the cost of providing for themselves at the market

price, which is why they end up invading the low cost houses meant for the low-income.

iii) Application of a universal solution

This solution was the adoption of a single strategy, and even the same prototype housing, for the whole country irrespective of the varied cultural and climate variations. The core housing strategy adopted by the Shagari government during the second republic was implemented nation-wide with a single prototype design, i.e. one bedroom units for the poor and three for the middle income. This was one of the major causes of the failure of these schemes. They were totally rejected in some parts of the country. In Sokoto states for instance more than 2,000 finished one bedroom units were not taken up by the low income (Popoola 1985). As a result, the units were allocated to middle and high income individuals who could expand the single bedroomed units into two and three bedroomed before moving in. The low income do that have the wherewithal to undertake this expansion even though most of them do need the extra rooms. Their family sizes and general life styles do not fit in with the imposed western style single bedroom units, for instance most of these are used to living in compound type houses with walling and courtyard spaces which are used for various purposes including sleeping, cooking and washing up. This contrasts very much with the design of the single unit where everything is put together in form of a box and people are shoved into it to live day and night.

This reveals the project's Architects' and Planners' narrow conception of housing need. Housing provision should not only cater for peoples' physical dwelling needs but also look at how these dwellings meet their psychological and cultural requirements.

iv) Lack of co-ordination between the State and Federal government programmes

This lack of co-ordination was particularly bad during the civilian administration, for instance, when the State Government failed to convince the Federal Government to allow them to implement the large housing programme

announced in 1980, they embarked on their own separate programmes, voting money and targeting the same group as the federal programme. This duplication of efforts shown by Onibokun (1990) satisfied nobody's interest, except the party loyalist, who were awarded the contracts to execute the programmes.

v) Remote locations of housing projects

These schemes were located in remote areas of the city and away from the central business districts where many of the low income work. This makes it unattractive to them because of the cost of transportation which could be more than the cost of rent in town centres. Also the remote location meant that they had to move away from the friends and relatives in their established communities who were vital to their day to day lives.

vi) Ineffective housing distribution system

The houses allocation procedures were characterised by fraudulent and corrupt practices. For instance the allocation of the Shagari low-cost housing schemes was heavily politicised in most states. The allocation process was based on party loyalty, it therefore excluded the labour unions, mass organisations and local authorities (Ogunshakin & Olayiwole 1992: 42). It was also a common practice to allocate two, three or more units to individuals from the upper income group who then turned them into rental accommodation for the poor. They charged rents in the range of 100 to 300 Naira per month as opposed to the 37 to 90 Naira amortisation paid on each unit by owner occupiers (Ogunshakin & Olayiwole 1992).

The earlier strategies have not only failed to provide finished houses for the low income but have also failed to facilitate the availability of housing loans, and the accessibility of urban land to them. The Federal Mortgage Bank, and other housing corporations established to provide housing loans, failed to benefit the low income groups who could not satisfy their loan conditions and did not have sufficient collateral in the form of adequate income or assets. Also the interest on the loans was too high and not affordable to the low income group.

A survey conducted in Calabar Cross Rivers State, by R.A Olu Sule (1983) for instance revealed that most (57.58%) of the loan applications rejected by the Bank in 1982 were as a result of the beneficiaries' low income.

This situation is the same in the rest of the country. This evidence implies that only the rich benefit from the loans while the poor have no access.

The urban land is also beyond the reach of the poor. The Land Use decree of 1978 which vested Nigerian land in the hands of the states, was supposed to facilitate land acquisition by all Nigerians, equal rights to land for both poor and rich and eliminate speculative activities and illegal land deals. This decree has become more of a statement of intent than a complete resolution (Sada 1984). The lengthy and sophisticated procedures which accompany land allocation are discouraging to most people, particularly the poor. More so, the land officers became corrupt and collaborate with middlemen to speculate in the government lands after taking huge bribes from them. The poor can neither afford to pay land officers bribes nor buy the speculated land in the market.

1.2.5 The need for the Sites and Services Strategy.

The above discussion has shown that earlier policy interventions have failed to solve the low income housing problems in Nigeria.

Similar observations have been made in the majority of the Third World countries by many housing experts since the late 1960s (like Van Huyck 1971:10; Van der Linden 1977: 294-8). They came to the conclusion that most attempts to either limit the rate of urbanisation, control the growth of squatter settlement or provide low income housing in the developing countries have failed, or at best touched only a fraction of the problem.

It was believed that sites and services and upgrading will increase the access of the poor to government housing investment in three different ways (Rodell and Skinner 1983);

(1) the money needed by the government to provide a conventional house for one family could provide many serviced plots or provide services to many families in an old established neighbourhood, thereby benefiting many; (2) the

cutting of standards and costs will increase access for housing to the poor. Cutting standards here refers to the initial standards of the units, which could be improved and expanded to the general overall standards by the time the house is completely finished; (3) lower rates of subsidy, which would mean less government investment and higher cost recovery from projects. This argument is not generally accepted because of the inverse relationship of subsidy to affordability of housing projects. Very low subsidy or no subsidy on low income housing project may decrease the affordability for them by the low income.

It was these arguments that convinced the government of Nigeria, like many other governments of the Third World countries to adopted the World Bank Aided Sites and Services Strategy which was directed at the low income group. The aim being to help the target group build and own houses through facilitating, services, land and construction loans. How far this aim has been achieved is one of the issues this study has addressed. The research problem, which has been identified as the low level of consolidation by the target beneficiaries, already point to the fact that not enough houses are being built in the project. Finding the causes of this problem is the main purpose of this study.

1.3 Research purpose, question and hypothesis

1.3.1 Research purpose

Having identified the research problem as the low level of consolidation by the target beneficiaries of the Makama Project, the purpose of this study as stated above is to find the causes of this problem.

1.3.2 Research questions

The main question the study seeks to answer is “Why has there been a low level of consolidation by the target plot allottees of the World Bank assisted Makama Sites and Services project? “

1.3.3 Hypothesis

The hypothesis of this study is that the low level of consolidation by the target beneficiaries in the Makama project is caused by the inaccurate estimates and false assumptions made by the planners regarding their housing affordability, needs and preferences.

The main hypothesis is broken down into testable forms as follows:

1. The cost of building a basic unit to the standard required by the project is significantly greater than that the target beneficiaries can pay for.
2. The target beneficiaries preferred hired labour for building to the self-built method assumed by the project planners.
3. The size of the basic unit which the target beneficiaries needed is significantly greater than that the project planners assumed.

1.3.4 Objectives

To achieve the main aim of the research which is to find the causes of the low level of consolidation in the Makama Sites and Services projects, the following specific objectives have to be pursued.

1. To establish that the target beneficiaries could not afford the cost of building a basic unit with the required building materials standard and show the effect of this on consolidation.
2. To establish that the use of hired labour was preferred by the target beneficiaries, and determine how this affects consolidation level.
3. To establish that the target beneficiaries needed a bigger basic unit than that assumed by planners, and find its effect on consolidation.
4. To establish that one of the consequences of the lack of consolidation is that the nonconsolidators are in a worse housing situation than the consolidators.

1.4 Research methodology.

The Research process began with identification of the problem, which raises the main research question. The answers to the question in the form of hypotheses were then put forward and tested. The results of the test enabled the researcher to accept the hypothesis, and therefore confirm that the problem is caused by the factors tested.

The research problem was identified from both the physical knowledge of the project and the existing literature on it and on similar projects (presented in Chapters 2 &3), including the literature on the concepts and background of the Sites and Services strategy in general, and World Bank projects in particular. The information provided a proper understanding of the research problem, its origin and its context.

The hypothesis put forward and tested by the study was formulated from the review of literature on the concepts of consolidation, factors affecting it and the causes of the low level of consolidation in similar projects (discussed in Chapter Four). The major source of primary data used to test the hypothesis came from a case study of the project. Data sources here include, field survey, project documents and officials.

Different techniques were used to collect the required data to test the study hypothesis including: a questionnaire-based survey, observations techniques, photography, formal and informal interviews.

The Survey which was carried out on a representative sample of 300 households was coded and analysed using the Statistical Package for Social Sciences at the Cripps Computing Centre of the University of Nottingham. For descriptive analysis, simple frequency tables and crosstabulation procedures were conducted. For the statistical analysis, the main techniques used include, the Chi-square and chi-square based Statistics, and the t-test (comparison of group means). The results of the analysis were presented in form of tables, charts and graphs. Details of the methods and techniques used in collecting and analysing the data are presented in Chapter Five.

1.5 Organisation of the rest of the Thesis Report

The rest of the thesis report is organised and presented in seven chapters,. Chapter Two is the review of the background and context of the research problem. This include the review of literature on the background and reasons for the adoption of sites and services strategy, its underlying concepts of self-help and aided self-help, including the self-help housing debates; and the World Bank's adoption of the strategy and the extent of its involvement with the strategy. The evaluation of World Bank assisted Sites and Services projects, which this study is mainly interested in, is also discussed.

Chapter Three is the case study from which the primary information of the thesis was drawn. The chapter briefly discusses the background information on the case study which includes; the characteristics of study area, the planning and implementation of the project. It also discusses the preliminary findings on the performance of the project in terms of achieving its stated objectives, while outlining its` major problems. One of the main problems, the low level of consolidation which is the subject of this study, is highlighted here and the detailed survey findings on its extent also presented.

Chapter four is a literature review on the causes of the research problem. It investigates from the literature, the existing explanation for the low level of consolidation in the Sites and Services Projects. The chapter starts by discussing the concepts and definitions of consolidation in Sites and Services projects and the factors affecting it. The information in this chapter was used to formulate the hypotheses for the study.

Chapter Five discusses the methods of data collection and the analytic techniques used to test the hypotheses.

Chapter Six presents the general findings on the socio-economic and housing characteristics of the surveyed sample.

Chapter seven presents the results of the specific hypothesis tests.

Chapter Eight is on the summary of findings, discussions and conclusions.

1.6 Summary and Conclusions

The research problem has been identified and its nature, extent, consequences and background have been discussed. Judging by the scale of the low income housing problems and the persistent failures of earlier policy responses, the need to evaluate and assess the performance of the new Sites and Services approach can not be over emphasised.

The starting point, however was to look at what literature already exist, in this area of new approaches to housing and to review what the earlier evaluators found regarding the nature and extent, as well as causes, of problems and discover what gaps there are in knowledge of the subject which need to be filled. To this effect, the first three chapters(2, 3 & 4) present this review. The information in the chapters is aimed at understanding the nature and extent of research problem in a better perspective. It also helps to understand causes of the problem in similar projects.

Chapter 2: The Sites and Services Housing Strategy and The World Bank.

2.1.0 Introduction

This chapter reviews the literature on the background and context of the Sites and Service Strategy and the World Bank involvement with the strategy, the understanding of which is necessary to put the research problem into its proper context and perspective.

The chapter is divided into two parts, with the first part on the background of the Sites and Services Strategy and the second part covering the World Bank involvement with the strategy.

Part one is divided into three sections. The first section covers the definition and background of the strategy, its aims and objectives, while the second section discusses its underlying concepts ,namely self-help and aided self-help housing concepts. The third section discusses the self-help housing debates by prominent housing experts notably, Rod Burgess and JFC Turner.

Part two is also divided into three sections, with the first section on the rationale behind World Bank's involvement with the strategy and the aims and objectives of the Bank's approach. The second section covers the planning and implementation of the World Bank assisted projects and the third section covers a brief summary of the findings of the evaluation studies of the projects.

2.1.1 The background of the Sites and Services Strategy

2.1.1.1 The interpretation of the strategy

The Sites and Services Strategy already defined in chapter one, involves the provision (by authorities/housing agents/international organisations) of lots with some level of servicing e.g. access roads, water, electricity and drainage - for low income urban dwellers who are expected to carry out the actual building of their future houses on these lots.

Although it is generally agreed by many housing experts and authors that the central concept of the Sites and Services Strategy is the provision of serviced building lots, there appears to be disagreement as to what else the concept does or does not imply (Van der

Linden J. 1986). Hence the concept lends itself to varying interpretations. While some authors stress the allottees' freedom to build the lots as they wish (Saini, 1979 : 89; Engleman, 1979: 16; Egnell, 1978: 26), others enumerate additional items of government involvement, such as to the provision of access to loans (Engelman 1979), construction materials (Lloyd, 1979:26) and mention limitations to the allottees freedom (Lloyd 1979). Hence authors like Van Huyck (1981) and Mayo and Gross (1987) are of the opinion that Sites and Services projects should be categorised into different types describing what each involves. Van Huyck (1971), for instance states that four major categories can be identified, " ranging from plots of raw land serviced with a few shared facilities to individually serviced plots with partially finished houses on them." In his opinion, a wide variety of proposals, which provide unfinished houses, come under the umbrella of Sites and Services.

However, for the purpose of this study, Sites and Services shall be defined as the projects in which the authorities provide essential services like water supply, electricity, roads and drainage, as well as community facilities like schools and health clinics, on a large area of land, which is divided into individual plots to be allocated to a target group of beneficiaries, who are given access to construction loans, and expected, through self-help efforts, to gradually build their houses and occupy them over a period of time. The cost is to be fully recovered from the beneficiaries. The materials and construction standards are usually specified by project planners, and plot allottees are expected to adhere to them.

2.1.1.2 Why the Sites and Services Strategy was adopted

Sites and Services came about as a result of the realisation that the conventional direct provision housing strategy has failed to reach the poorer sectors of the population in the majority of the developing countries. In the late 1960s, a number of prominent housing experts after various studies of the squatter settlements in Third World cities, came to the conclusion that conventional approaches to housing the poor had failed and that assisting self-help efforts was the most viable alternative.

Turner (1966,1972), Abrams (1964, 1971), Vernez (1974) were all of the opinion that the replacement of the slum dwellings with conventional housing had failed to meet low income housing needs. Turner also stated that slum dwellings are expressions of the desire

and ability of the low income to solve their housing problems. He argued that if these efforts are harnessed to some investment by the authorities, more could be achieved towards solving low income housing problems in the Third World countries with less cost than is required for conventional housing.

Rodell (1983) was of the same opinion when he stated that governments can develop two to five serviced plots with the resources needed to build a single house in a conventional housing project. Also many more poorer people will have access to housing through the upgrading of old settlement and lowering of standards, with the same investment needed to provide conventional housing.

2.1.1.3 Aims and objectives of the Strategy

The main aim of the Sites and Services Strategy is to increase access to good housing for a wider proportion of the population than has been achieved by the conventional housing with the same, or less, amount of government investment.

Other aims of Sites and Services include, housing the poor (Vernez (1976:10; Dione 1980:1; Van Huyck 1971:11; McNamara 1975:32; Muller, 1982: 90); increasing the stock of permanent housing while limiting public expenses (Vernez 1976: 11 Peattie 1982a :133).

Swan, Wegelin and Panchee (1983) also pointed out the following as some of the advantages of the Sites and Services.

- a greatly increased supply of building plots with urban infrastructure and services that, while economical of resources, cannot be readily supplied on an unorganised basis;
- creation of efficient new townships with more efficient urban development patterns;
- much better living conditions than those available in unplanned squatter settlements;
- increased scope resulting from self-help construction providing dwellings at minimum cost while stimulating non-monetary savings and income;
- significantly improved employment opportunities and training;

- security of tenure and a basis for development;
- a better general environment.

Although these aims are often stated in most sites and services projects, care must be taken as to the correct emphasis when interpreting them. As Van der Linden (1986) has stated. "When `restoring planning control` implies- as it sometimes does - replacement of squatter settlements by site and services projects, the aim of `alleviating the demand for low income housing` will hardly be met. Similarly, if the emphasis is on `increasing the stock of permanent housing`, or on `developing a strong construction section`, this can easily happen at the expense of `responding to the needs of the low-income groups`."

Having defined and stated the aims of the Sites and Services Strategy, It important at this point to gain an insight into the interpretation of self-help housing and aided self-help housing as the major ideas behind the Sites and Services strategy.

2.1.2 Self-help housing and aided self-help housing

2.1.2.1 Interpretation of self-help and aided self-help housing

Traditionally, self-help housing simply means, people using their own labour to collect materials/building components, prepare sites and assemble component into houses (Rodell 1983). Earlier writers on housing like Abrams and Koenigsberger have recognised and acknowledged the contribution of self-help housing through the history of mankind. Abrams (1964) pointed out that self-help housing accounted for most of the houses in the world today and historically.

Rodell (1983) has pointed out that the traditional view of self-help which the earlier writers had talked about, tended to put more emphasis on the technical aspects of families using their own labour to assemble materials and make a house as the only significant input besides the land.

However, Turner's extensive studies of squatter settlements in South American cities (particular his early study in Peru) had changed that view. His findings had led to the redefinition of self-help housing as comprising the following two elements: 1). the element of direct investment by families, either through unpaid labour or cash savings and 2). the element of decision making by the families about the investment.

2.1.2.2 Contemporary versus historical interpretations of self-help housing.

The following table (adopted from Rodell 1983), outlines the basic differences between the views of self-help in the 1950s and in the 1970s (i.e. before and after Turner’s study).

<u>Before Abrams (the 1950s)</u>	<u>After Turner (the 1970s)</u>
Basic Idea	Basic Ideas
Self-help housing = unpaid family labour	self-help = a) families deciding about investments b)investment inputs supplied by families, either inputs purchased by cash savings or unpaid labour or both
Examples	Examples
shacks and shanties in squatter neighbourhoods.	Covers a range from shacks and shanties to standard neighbourhoods.
Construction process	Construction process
1. squatted land	1. Various and unpredictable, and lasts from one to five, ten or even fifteen years.
2. scrap and waste materials	
3. unpaid labour on weekends and at nights	shacks and shanties can be a final product or an intermediate stage within the process.
4. construction starts from occupancy and ends a day to a year after this date.	
The end product is constrained by families’ incomes during one year, cost of materials and illegality of tenure.	The end product is constrained by families incomes over a decade or more, cost materials and perceived security of tenure

Who uses self-help

Recent migrants from distressed rural areas.

Who uses self-help

Anyone can; usually families who start with self-help are at a low to middle income at the time they start.

Policy implications

1 The basic theory: Self -help reduces the construction cost of a given type of housing.

Policy implications

1 The basic theory: under certain conditions, self-help increases investment in housing because

- a). it adds unpaid labour to the resources used in housing;
- b).it adds inputs purchased by families to resources used in housing

2 Conditions for success

Self-help reduces cost under all conditions

2 Condition for success

- families have to wait for five or more years for conventional rental or ownership housing;
- families find currently available conventional housing do not meet their definition of a desirable housing

3 Problems to overcome

a) lack of land; b) lack of credit to buy standard materials for a complete house at the date of occupancy; c) lack of planning and construction skills needed to build conventionally.

3 Problems to overcome

a) lack of secure , good , well located building sites; b) building and land use regulations making a number of self-help options illegal; c) lack of public services; d) lack of small construction loans.

4 Solutions: plan house construction to use as much unpaid labour as possible, with appropriate assistance. **4 Solutions:** plan new neighbourhoods in which families have secure, good , and well located land.

It is very clear, from the above distinction, that contemporary self-help is about both decision making by families regarding their investment in housing as well as the technological aspects of assembling building components into a house.

Turner's ideas about the new definition of self-help housing resulted from his extensive studies of squatter settlements in Peru in the early 1960s.

His observation of the struggle by the low-income group, under all conditions, to secure a shelter over their heads demonstrates their motivation, independence and enthusiasm in dealing with their housing problems. His studies have also led to his understanding of the relationship between peoples and their housing process, and how they build the houses to suit their social needs and match their economic circumstances at any given point in time. He therefore argues that instead of looking at these efforts as housing problems, they are infact a solution. He pointed out that the reason most of them are poor quality and standards suggest the need to address the major constraints of the groups to improve the standards.

2.1.3 The Self- help Housing Debates

The interpretation of self-help and self-help housing is a subject of debate between housing experts. The major debates has been between Rod Burgess and JFC Turner, and have been centred around the work of Turner in South American cities particularly in Peru. The foci of the debate, as categorised by Burgess (1978), are: (a) The conception of the nature of housing; (b) the relationship between the public, private and popular sectors in housing; (c) the conception of the role of the state and the planning in housing policies ; (d) Turner's main policy recommendations (Burgess 1982).

2.1.3.1 Turners views

a) The conception of the Nature of Housing

Turner defines housing both as a process as well as a product. He argues that the most important thing about a house is not what it looks like, but what it does to peoples` lives. This means that the satisfaction from a house does not necessary relate to the standards of materials it is built of (Turner 1976). The value of a house must therefore be sought in it's relationship with its user. This means that the value varies according to how far the house satisfies or frustrate its occupier.

He also argued that the market-value of housing, which is often associated with the standards of its material, are very distinct and give only a partial view of the true value of housing.

While elaborating on the theme of what a house does to the lives of occupiers, he made a comparison (from his case study in Peru) between a self-built shack (which he called 'supportive') and a modern house (which he called 'oppressive').

From the household's economic point of view, he argues that the supportive shack is rent free, which may mean that families have surplus income to save towards a permanent dwelling in the future.

The household in the oppressive modern house, on the other hand, paid 55% of their income towards rent, and 5% towards transportation because new housing estates were located far from the city centre where most inhabitants worked. The 40% of their income remaining was scarcely enough for food, and saving for a future house was totally out of the question. Furthermore, the vending activities which many households undertake in squatter settlements to supplement their incomes, were prohibited on the new housing estates.

Although the modern house offers high standards of building, it represents a serious imbalance between the household's income and their housing expenditure, which could have serious consequences on all aspects of their lives.

b) The relationship between the public, private and popular sectors in housing

'when dwellers control the major decisions and are free to make their own contribution to the design, construction or management of their house, both the process and the

environment produced stimulate the individual and social well being. When people have no control over, nor responsibility for key decisions in the housing process, on the other hand, dwelling environments may instead become a barrier to personal fulfilment and a burden to the economy.’(Turner 1976)

While elaborating on this point, he proposed that design, construction and management of housing must be shared between the users (popular sector), suppliers (private sector) and regulators (public sector or government), appropriately to ensure greater control by the popular sector who are the users.

He identified two different housing systems in operation where the degree of control by the three sectors varies considerably. In the first system, which he called ‘autonomous’(locally self-governing), the majority of decisions are made by users and a minority by either private sector or government, as demonstrated in the following figures.

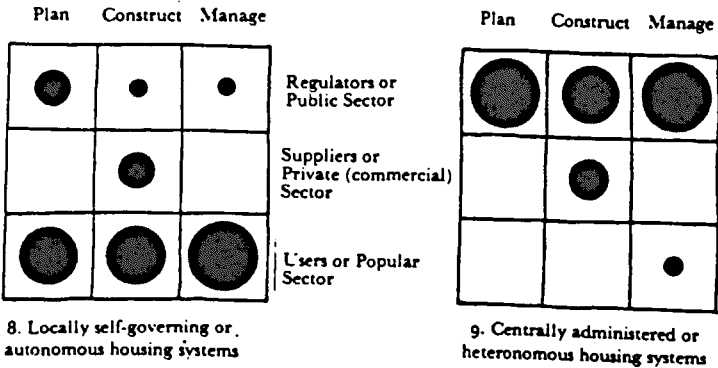


Fig 2.1 a&b : Patterns of decision and control in two opposite housing systems
Source: JFC Turner (1976): Housing by people :29

His basic idea here is that the autonomous housing system works better, because it will ensure a variety of controlling systems as the system to be controlled, while quoting Ashby's idea of requisite variety.

To make this point clearer, he gave the example of the British housing system in which the public and private sectors have greater control. He pointed out that its rigid and hierarchical nature alienates the poor by creating mismatches and misfits, thereby increasing the growing number of homeless people on the streets. He is also of the opinion that hierarchical systems, particularly in the developing countries, are not sustainable because of their increasing dependence on borrowed capital.

He argues that "the larger the organisation, and the more central management becomes, the more frequent and the greater the mismatches would be between the priorities in peoples' housing needs and what they get." (Turner 1976). Large central organisations used costly and sophisticated technologies and highly paid bureaucracies, which demand a high proportion of the increasingly scarce resources, he added.

His conclusion therefore is that 'the design, construction and maintenance of adequate housing at prices both people and society can afford depends very much on the investment of resources which households themselves control.' These findings, he pointed out, have been found to be as relevant in both North America and Britain as they were in Peru.

He argues that a viable housing solution should therefore be based on the principle of self-government in housing, the use of small scale technology, and on the basis of prescriptive laws (Burgess 1978).

He pointed out that the authorities should concentrate on tackling the major constraints facing self-help builders (already stated in the table above) which include: lack of secure well located land, restriction of planning and building regulations, lack of public services and lack of building loans.

c&d) the role of state and planning in housing and policy recommendations

Turner's policy recommendations have been summarised by Burgess in the following statements:

1. Legislative controls limiting the concentration of resources and facilitating the supply of land, technology and loans to low income people.

2. The modifications of the existing legislation on minimum standards and building procedures.
3. The introduction of legislation and planning practices that set limits rather than procedural lines for housing activity.
- 4) The legalisation of tenure of land and dwellings illegally occupied by squatters.
- 5) The clear separation of various levels of authority in housing activities and the restriction of central government and municipal influence to certain well defined and basic functions.
- 6) The encouragement, if possible, of formal sector activities through proscriptive legislation that gives decentralised technologies and local systems of labour, finance and materials, greater access to resources.

The above recommendations have been the basis of aided self-help housing, which stipulates the provision of some form of assistance by the authorities to the self-help builders to carry on building by themselves. This should be done, through: (1) planned new neighbourhoods in which families have secure, good well-located sites, infrastructure and access to technical assistance, and in which they are free to make decisions as to how much to invest in Sites and Services).

- 2) upgrading the old neighbourhood by giving families assistance to improve individual dwellings, modifying the existing legislation on minimum standards and building procedures, and legalising dwellings illegally occupied by squatters.
- 3) restricting the role of governments to that of securing land and developing infrastructure.

This view of the solution of low income housing problems has generally been seen by the proponents of self-help as an economically viable, socially and politically effective method of solving the low income housing problems in developing countries.

2.1.3.2 Burgess's view

a) Interpretation of Housing

Burgess has voiced an alternative opinion to the generally accepted Turner school of thought. He has questioned Turner's understanding of the basic concepts of self-help and his ideological view which has led to the solutions he proposed, while offering an alternative interpretation of the concepts.

In his article 'Self-help housing advocacy: a curious form of Radicalism, a critique of J.F.C. Turner' (published in Ward 1982), he made his alternative view of self-help clear, while criticising Turner's view.

He argues that in defining the concepts of housing Turner tends to confuse the utility (use-value) and exchange value (market-value) of a house, when he refers to the self-help house as having use-value and not exchange value. He added that the tendency to equate the use value of a house with total utility and identify market-value as a ratio of exchange is contrary to the classical economic concepts of need which is identified with the concept of demand, through such notions as 'revealed preferences.'

Burgess also thinks that Turner's interpretation of self-help concepts does not allow (a) the transformation of the self-help house into commodity form by the producer himself; (b) the fact that one man's use value can be another man's exchange value; (c) that a self-help house can be a very different commodity to the various interest groups operating in the broader urban market.

He also argues that the production of a self-help house must be understood in the context of the process of commodity formation under the conditions of capitalism operating in most societies today.

He argues that a self-help house, even when produced and used by the producer must be seen as a potential commodity which can have an exchange value when the owner decides to put it in the market. He pointed out that the distinction therefore should not be between use value and market-value, but rather between a potential commodity (a self-help house

produced primarily for consumption by its owner) and a real commodity produced by agents primarily for exchange in the market.

Furthermore, he argues that it is senseless to think of a self-help house as a use value when it's constituent elements have already been given value. For instance, he pointed out that the production of a self-help house consumes products (cement, timber roofing materials, iron parts, electrical equipment's) which are commercially supplied and have market value; also the construction of a house involves the use of a labour component, either paid or unpaid, which has a market value.

b) Relationship between the public, private and popular sectors in house production.

The three areas Burgess focused his criticism on are: Turner's principle of self-government and control by the people; the use of small scale technology and managerial tools in house production; and the idea of proscriptive planning legislation rather than prescriptive planning laws.

He pointed out that Turner's view of a housing economy as dependent on the level of heterogeneity in its production, has lead him to analyse the cost of production of a autonomous house as being low, while that of a heterogeneous house as being high, because of the differences in the structural and organisational features of the systems of construction.

He referred to where Turner suggested that a squatter, with a suitable building plot and secure tenure, can build a house at under half the cost of a government agency house. He pointed out that the cost savings by the builder is not simply because of the absence of a technocratic system, or the legal housing laws, or methods of building operations, but due to the fact that "he is operating in a different sphere of circulation of capital - that covered the petty commodity production of housing." He therefore does not escape capitalism, but is another part of it.

He argues that both systems are operating within capitalism and the relationship between them is that while "the hierarchical system is merely an expression of the formal process

of valorisation of the capital involved, the autonomous system on the other hand is the form that the petty commodity process of valorisation assumes".

He stresses that the fact that Turner locates the origin of housing problems in the operation of hierarchical and bureaucratic system rather than in the operation of a specific mode of production, demonstrates his lack of understanding of the commodity processes and historical or social concepts of use values. Turner's knowledge, he added, is limited to the level of the object of housing. Turners view, he stated, "set a moral crusade against all social and economic systems organised on the basis of hetronomy," while undermining the existence of the contemporary ideological differences and political struggles over these differences. He argues that the whole debate about self-help housing and institutional housing policies is a debate carried out within the parameters of a bourgeois ideology. In his opinion, the differences between self-help and institutional housing are that of form rather than substance because as long as the capitalist mode of production continues, the commodity status of both will remain.

c&d) The role of state and planning in housing and policy recommendations

On Turner's recommendations, he argues that Turner's inability to understand and see the real economic aspect of the self-help housing in the capitalist mode of production has blinded him from the realities that are vital in understanding housing commodities. His policy recommendations, even if functional, were only to be short term.

Burgess understood Turner's policy recommendations as an attempt to stimulate and expand petty commodity housing, because industrial housing had failed to satisfy the needs of progressively larger sectors of the society.

He argues that Turner is totally in favour of petty bourgeois interest and "his alternative housing is that of rearranging rather than replacing the existing capitalist social relations." This he pointed out is made clear from Turners constant reference to petty entrepreneurs and the desirability of, and necessity for, differentiation within the barrios.

He argues that Turners policies could not be implemented on the scale, and in the manner, which he considers to be critical to their success. If they ever are, he added, it

would result in drastic and dangerous consequences for the low-income group in the following ways:

1). If government-guaranteed access to housing resources was achieved by the low-income it would present a massive diversion of investment away from middle class consumption. This would not only stand in direct opposition to the growth strategies in the Third World countries, but also polarise the existing class alliance necessary for a modernisation 'programme.' He argues that the access to resources is more of an economic and political problem rather than a technical one.

2). There would be a catastrophic effect on the prices of basic building materials (e.g. cement, sand, gravel, glass, iron roofing materials etc.), which would also extend to recycled materials and accord them a new exchange value. He concludes that "access to resources is not guaranteed by legislation alone."

3). The intervention of the state to purchase large pieces of land would also have a dramatic effect on their value, thereby increasing the housing cost to those groups who would have avoided them. His conclusion is therefore , "the problem of legality is fundamentally the issue of market valuation of land."

4). There would be a heavy burden on the provision of infrastructure resulting from the high rate of construction.

5). The multiplier effects of self-help are particularly limited because of its utilisation of unpaid labour. He argues that housing policies can not be presented in isolation from general development strategy.

6). Even if the policies make any significant impact on housing deficits, they may just lead to an increased rural-urban migration that would soon neutralise their impact. He pointed out that the housing problem is as much a rural as an urban problem and both are functions of the operation of the dominant capitalist mode of production.

He concludes by suggesting that Turner's self-help housing policies are no more than an ideological bluff which have very limited application in the real world. For the poor to be

told to be more self-reliant when they are already doing everything, may appear, as rather a curious form of radicalism.

Therefore Burgess's basic point is that it is government responsibility to provide for the poor, which was made clear in his following statements.

(1). The goal of socialist government policies should be to generalise the industrialisation of production of basic goods and services including housing, so that basic needs can be satisfied with a minimum of human labour and without exploitation; and (2) that housing which is a consumer good, must be supplied to acceptable standards by the authorities as a right and (3) that as a product, housing is a dependent variable of the political and economic system and any problems in the supply of housing must be dealt with through the political and social structures.

Another prominent critic of Turners worth mentioning, is Harn Harms. Harms share a similar ideological view of the self-help housing with Rod Burgess. In addition to sharing most of the arguments put forward by Burgess, he also point out that self-help housing has been promoted and defended, historically by various fractions, particularly conservatives as a response to the conditions of economic crises. In article 'Historically perspective on the practice and purpose of self-help', he was able to trace the historical periods of economic crises and relate them to the self-help movements occurring then.

2.1.3.3 Turner's reply to Burgess's criticism

In response to the above criticism, Turner regarded the majority of the arguments as a demonstration of the critics' misunderstanding of the important issues he addressed in self-help housing. While Turner did not attempt to counter all the arguments, in reply to them he tried to make clear what he called the 'real issues', which he felt constituted the major areas where he was misunderstood. This discussion was presented in both his articles: 'The term of reference' (1978) and 'Issues in self-help and self-managed housing' (1982).

On the question of *value of a house*, he felt that Burgess misinterpreted the issue of *what a house does* versus *what it is*', to mean use-value versus market-value. He pointed out that what the term implies is that value lies in the relationship between subjects and objects alone, and not a question of use-value versus market-value as Burgess assumed. He emphasised that he has not in any of his writings implied that the market value of self-help should be excluded as his critics have assumed. The issue he pointed out is a question of balance between the use-value and market-values, rather than a choice between the two. "The issue of value is a question of the means as well as the end of what is needed and what is done", while the issue of economy is that of usefulness versus productivity.

When he talked about housing *economy*, in reference to small scale organisations and local production, by the users, he was referring to the evidence in both agriculture and housing, which showed that these basic necessities are more efficiently produced by large numbers of small organisations than by small numbers of large organisations. He added that capital intensive industries, which require large organisations, are suited for those productions which are not effectively produced by small local organisation e.g. ship production or communication satellites.

He also pointed out that the Schumacher's 'intermediate technology' and 'small is beautiful' ideas, on which his small localised housing production is based, were not meant to replace high industrial technology as Burgess and other critics understood it. It should be understood as the identification of the existence of a wide range of different level of technology available as a means of achieving various ends. This range varies from traditional technology requiring very little hand tools, through to an intermediate level and on to highly sophisticated capital intensive industries requiring sophisticated machinery. Each is applied to achieving a particular end, and if misapplied becomes counter-productive. This was the point Turner has argued when he stated that the misapplication of centralised modes and capital intensive means of production in housing or other local activities waste resources and reduces the supply of goods and services.

He also made it clear that his basic point on dweller control is about decision making, as repeatedly mentioned in all his writings (Turner 1966, 1976, 1977) and not only about the

use of free labour, as many of his critics tend to think. He also stresses that his decision making does not always refer to an individual household activity, but rather emphasis was put on the personal, local or social.

Turner stresses that while he respects the logic behind Burgess's position when he argued that housing as a commodity should be centrally supplied with the use of minimum labour and without exploitation, he pointed out that he could not accept it because of the following beliefs (a) that personal fulfilment depends on participation in the production of necessities; (b) that centrally administered systems do not only exclude people from the process of production but also lead to excessive demands on scarce resources; (c) that only self-governing people working locally are capable of using the plentiful, renewable and pollution free resources properly. In his later article 'future directions in housing policies' (1986) he reiterated his ideas of balance of control in housing production by identifying local, intermediate and central as the three levels of authority in operation in housing production. Demonstrated in figures below.

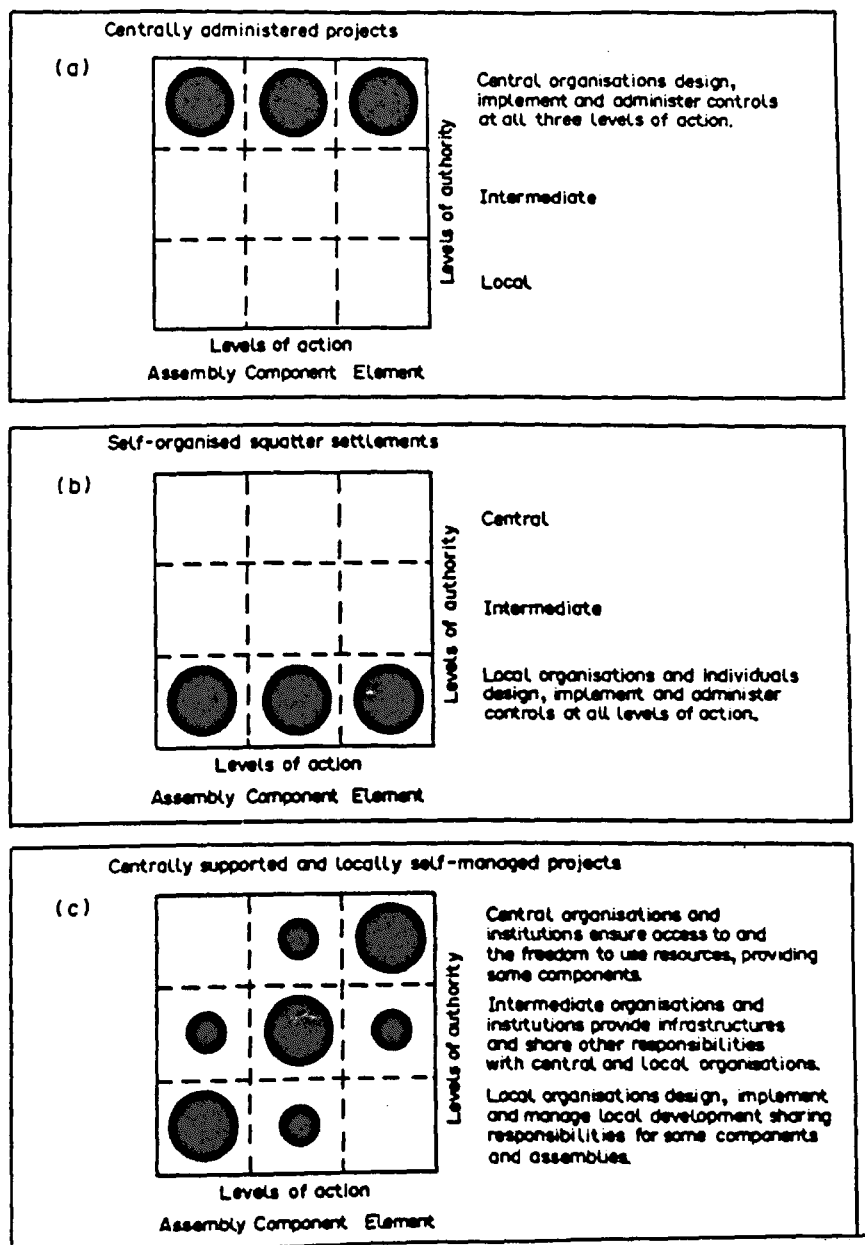


Fig. 2.2 a&b : patterns of action and authority . Source: Turner JFC (1986) : 17

Local authorities, an example of which is a squatter settlement where all decisions are made locally and unilaterally by the people, while the central authority is where all decisions are taken centrally and projects administered from the top. Authorities are totally concentrated on the hands of the organisations. Intermediate organisations on the other hand are a middle ground where local housing actions are supported by authorities guaranteeing access to basic resources and a freedom to use them. Authority over infrastructures and local services are mainly in the hands of local authorities and local industries with some contribution from the central authorities and the local community. Design, planning and implementation is entirely in the hands of local people with some contribution from the local authorities and industries.

The intermediate organisations where power for local actions are entrusted on local people via decentralised local organisation with support from central authorities has been advocated as the appropriate organisation for housing production

This idea is what has come to be known as the principles of *devolution, decentralisation, support and empowerment in housing*. Turner has always referred to these principles in various of his writings. He strongly belief that only by empowering, and supporting people to decide and act on their housing investment can an economically viable, socially acceptable and user friendly houses be achieved. He is of the opinion that higher authorities and big local organisation should not carry housing actions at all. Those organisations should play a supportive role by providing access to basic services, building materials and elements as well as loans for building. This advocates that the whole business of design, construction and management of low income houses should be undertaken by the people who need them rather than the authorities. This idea was also made clear in Turners article 'From central provision to local enablement (1983:207-209), where he pointed out that the new policy approach should be based on locally determined, self-organised and self managed programmes by the people who need them. Similarly, Wegelin et al (1983), while supporting the idea of people empowerment and support in housing as a viable option, pointed out that their study of the Asian experience with the sites and services approach has shown that functional housing, appropriate to peoples needs will be arranged by themselves while the government plays a supportive role.

Turner(1986) also pointed out that the transfer of responsibilities and authority over decisions that are difficult for central agencies to administer but relatively easier for local people in their own communities would have certain advantages which include bringing the local people and professionals to work together with a mutual respect and understanding. It can give the local people the power to negotiate with governments, local agencies as well as international agencies. This is already happening in some of the World Bank assisted projects.

The idea of giving people power to build their houses has either deliberately or otherwise been misinterpreted in the planning and implementation of the majority of the aided self-help projects. It is often interpreted as a limited participation of the low income at the level of construction of their individual houses, while decisions about planning, design and management remains in the hands of the authorities. This misunderstanding, as wegelin et al (1983) has pointed out has stemmed from the attitudes and perception of the roles of authorities, government bureaucrats and housing professional. They are accustomed to the idea that the provision of low income housing is their responsibility and the poor look up to them to handout houses. It is difficult therefore to come to terms with the fact that the poor should be given the power and support to do it themselves. They see it as losing power, control and being made redundant.

2.3.4 Evaluation of the debate

In effect Turner's critics adopting the Marxist view point, are saying that the use of self-help housing, allows the labour of the poor to be exploited twice, both at work and in home building; it also helps to maintain the status quo and discourages the necessary social change; increases the access of poor to low-cost housing, reduces the subsistence level and thereby reducing pressure for wage rises; rationalises poverty and provides only a stop gap and not long term solution.

Turner and his supporters with a more liberal view point, on the other hand are saying that, under the economic situation of scarce resources and competing demand, it is obvious that the authorities can not provide adequately for everyone, which has already been demonstrated by his various studies in especially the Third World countries. Therefore, it left with two options; one is to do nothing and let the poor continue to suffer

as they have been doing and, two is to put in what they can afford and harness the resources and efforts of the poor demonstrated in their self-help activities to achieve a better solution. He has recommended option two.

It is clear, from the above discussion, that both Turner's and Burgess's views and arguments on the interpretation of self-help concepts have their merits in the areas which they cover. Both views have had support from other prominent housing experts. Payne (1976, 1982.), Abrams (1966,1972), Vernez (1976), Wegelin (1983), Dione 1980, Peattie (1982) all have similar views on self-help to those of Turner, as demonstrated in their various writings. For instance, Payne's book 'Low income housing in the developing World: the role of sites and services and settlement upgrading', was based on the original ideas of Turner.

Other people with the same view as Burgess include; Deniz Kandiyoti and Harms (1976). It is very important to note that firstly, though the critics of Turner's ideas are logically consistent and sound in their arguments, they appear to have little or no detailed data to substantiate them.

Turner's arguments on the other hand are not only logically consistent but also based on his real life experience in the countries he had studied.

Secondly, although Turner's critics have raised very important points in the debates on this area of housing, many of them, as Turner pointed out in his response, appear to misunderstand the major issues which he had addressed in the first place.

Thirdly the whole debate could also be a case of different ways of interpreting the same concepts, which may have been influenced by the writers' backgrounds, exposure to similar situations and experience in this particular area. Rod Burgess, for instance, though has a doctorate degree in self-help housing, is primarily a geographer and lectures geography. Turner on the other hand is an architect who has lived and worked in different parts of the World, held an appointment in Department of planning and has written much about his studies of squatter settlements especially in South American cities.

By and large, there is no doubt that all participants in the debate have their valid and respectable points and experiences in this area of housing. However, it could be argued that the work, experience and exposure of Turner's critics in especially the Third world housing problems, is hardly comparable to that of Turner. Also the fact that his concepts have been found to be relevant not only in the Third World countries, but also in the United States and Britain shows his ideas have a universal application. Furthermore, the fact that his interpretation has been applied (particularly in the Third World countries) for over 30 years shows that it can also stand the test of time.

However the debate is still valid insofar as it opens up other avenues of looking at self-help housing, especially in relation the specific mode of production, as Rod Burgess has pointed out and the influences of both political and social interests groups in it. Therefore self-help is still open to debate and need more research to be done to help clarify the issues raised. In recent years, however, the debates have been extended to the main applications of the concepts i.e. Sites and Services and Settlement Upgrading Strategy. A number of housing experts (e.g. Peattie 1973, Laquian 1982, 1984, 1986 etc.) have voiced opinion and expressed their doubts about the effectiveness of sites and services in solving low-income problems in the Third World, especially following the large scale involvement of the World Bank with the strategy. This has lead to a growing volume of literature on the evaluation of this strategy, the review of which is covered in the next part of the chapter.

2.2.0 The World Bank's adoption of the Sites and Services Strategy

Having been convinced by its own studies and through the influence of earlier studies and writings of housing experts like Turner, Abrams, and Mangin, already mentioned above, that the earlier policy interventions have failed, the World Bank came to the conclusion that the problem is a lack of understanding of the problems on the part of policy makers as well as housing agents. Looking at the situation in economic terms the Bank concluded that all existing evidence shows, "there is a sufficient demand for housing, but numerous constraints make for the weaknesses on the supply side. As long as the supply side keeps providing conventional permanent housing only, it is not properly geared towards the enormous existing demand. The only viable method to correct this imperfection is to bring the supply cost down, so that housing and services become accessible to the large portion of the population presently excluded in the housing Market" (Van der Linden 1986).

The Bank also pointed out that corrections must be made to the three major components of the supply which are; land, services and finance. Regarding land, the Bank pointed out that the institutional constraints inherent in the supply of land must be eliminated. Regarding services, the World Bank argued that the standards are too high and that costs can be brought down by lowering these standards. As for finance, the financial institutions must be developed and sound pricing policies be implemented geared towards major cost implied reduction. In addition to cost reductions, public expenditure must be minimised, as in the following statement of the Bank, and quoted by Van der Linden (1986):

"In view of the scarce public resources and the enormous demand, reliance on subsidies will not only be uneconomic it will also be sure to strain the replaceability of any such undertaking (World Bank 1972: 65; 1974: 3; 1975: 18; 1980a: 11-12)."

One way of reducing public expenditure the Bank pointed out was to shift the financial burden from the Government to the private sector and the urban population itself through an active mobilisation of their energies and resources. Such resources can be trapped by letting them build their houses by themselves, the same principles of self-help which earlier writers of the Turner school of thought had put forward. Based on this basic

principle, the authorities are only expected to facilitate the major inputs of housing which are; land , services and access to finance, while the households undertake the actual building process by themselves. The recognition of the negative effects of eradicating squatter settlements, had made the Bank expand the scope of their adopted strategy to include the squatter upgrading aspects in addition to the servicing of freshly acquired land.

2.2.1 Goals of World Bank's Sites and Services Strategy

In adopting the strategy, the Bank also hoped to achieve the following goals:

- i).The eradication of poverty which the Bank argues is a common cause of civil upheavals and violence. McNamara, the then Governor of the Bank, was reported to have said "if cities do not deal with poverty, poverty will begin to deal with cities" (McNamara, 1975: 20).
- ii). The Bank pointed out that "housing is used as a tool for macroeconomics development", which leads to higher national productivity and a greater flow of income by using the under-utilised materials, labour and financial resources (World Bank, 1972: 3,17).
- iii).The third goal is in the wider context of a more rational pattern of urban growth where Sites and Services plays a part of providing ` orderly, more efficient alternatives to squatter invasions (World Bank 1972: 4).

However it is interesting to note that the Bank made no pretension to trying to solve housing problems in the developing countries. It is clear by its approach that the problems should be self solving. Its role was only going to be catalytic in nature (McNamara, 1975: 35), and based on three main principles. One, is the principle of affordability which will demonstrate that there are low-cost, affordable and user acceptable solutions to housing problems. The second principle is cost recovery, which implies that the cost of housing should be recovered from the beneficiaries. Having recovered the cost, the projects should therefore be capable of replicating themselves; this is the third principle. Also the Bank was to play a role in housing institution reformation and building, having discovered that this is a major bottleneck in the supply of housing (World Bank 1972: 7). With these

set goals and clearly defined principles, the Bank set out to persuade the majority of Developing Countries to adopt the strategy, with its financial assistance.

2.2.1.1 The World Bank assisted projects

When the World Bank decided to intervene and help developing countries in providing low income housing, many sceptics doubted how the Bank could serve the interest of the poor, given its tough economic reputation (Laquian.1983 : 221).

Between 1972 and 1981, the Bank was reported to have partially financed 36 urban shelter projects, most of which are either Sites and Services or upgrading with a commitment of about \$53.2 million in the different regions of the developing world (Swan 1983). This figures have increased drastically in the last few years. Onibokun (1989), for instance, reported that by 1988 the Bank's financial commitments to shelter assistance in developing countries was \$2 billion dollars on 62 different projects.

While the earlier projects in Botswana, El Salvador, Jamaica, Kenya, Peru, Senegal and Tanzania focused on sites and services mainly, the later ones in Columbia, Indonesia, and Zambia emphasised upgrading (World Bank 1983 : 16). The Nigerian projects (in Bauchi and Owerri) have more emphasis on the sites and services, but also have the component of upgrading.

2.2.1.2 Objectives of the Bank projects

The following are the major objectives of the projects as stated in the Bank's document (World Bank 1974).

- to increase the supply of building plots with urban infrastructure and services which are economical and affordable.
- to create environments with better physical living conditions than that found in squatter settlements.
- to restrain the growth of unplanned settlement.
- to provide affordable dwellings through self-help construction.
- to give security of tenure and a basis for economic development
- to significantly increase training and employment opportunity

-to provide more adequate social services and a generally better housing environment.

To pursue these objectives, the Bank outlined some guidelines concerning the design, financing and organisational aspects of projects which were thought to be very crucial to their success.

2.2.2 Bank's projects planning and implementation: guidelines

i) Projects design

The issues dealt with under project design included, target income groups, scope of projects, standards, employment and self-help.

a) Target group

In all the Bank's projects, a 'target group' was identified for whom the project's benefits are intended. The choice of this group was the first issue in the design of the projects. The projects by definition were meant for the poor. However, the Bank (1974) pointed out that if the cost of projects were to be recovered from the beneficiaries, the poorest stratum of the population can not be included in the target group. It is believed that for the poorest group, day to day survival is the primary concern. Investment in housing to either build new units or improve old ones, is much less important (Swan 1983 :19). The Bank argued that the poorest group were to benefit through the so-called 'trickle down effect' where, if the targeted low income group were allocated plots on the new site, they would move out of the squatter settlements reducing the overcrowding for the poorest group who would remain there. It was also suggested that rental rooms for the poorest group could be allowed in the new project. Furthermore, the complimentary squatter upgrading projects were bound to benefit the poorest groups who lived in the squatter settlements. The important issue in the selection of project beneficiaries is therefore that of the income mix of group. It was pointed out that a mix that will include a certain percentage of the middle income could be beneficial to cost recovery as well as an opportunity to provide a cross-subsidy. Also it was argued that the new community may open up marginal employment

opportunities like vending, washing, housekeeping and other domestic services for the poorer households, which will supplement their earnings.

However, the Bank warns that where this practice is used, care must be taken as to the proportion of land allocated to the middle income group. If too much land is allocated to them, less is available to the low income. Furthermore, the middle and higher income are often only attracted to larger plots. Care must also be taken to identify all the subsidies (direct and indirect) that may be involved in a project and ensure that they are not passed on to the middle income group who do not need them.

b) Project scale and location

On the issue of project size, the Bank stated that this should be large enough to take care of the housing supply backlog and accommodate the growth in population of the group for which they were being designed. This scale of projects, which will usually run into tens of thousands of units, in most cases cannot be viable at immediately. The Bank suggest that the replaceability of projects over time will expand them into larger scale programmes. Also, where both services and settlement upgrading are designed and implemented together, a larger scale of beneficiaries is achieved, which should have a significant impact on the backlog (Swan 1983).

However, it is also important to note that the need for large scale sites and services projects has a direct bearing on the location of the projects. Large empty sites are not often available in the centre of most urban cities. This means projects have to be located at the periphery of the cities. The major disadvantages of the remote locations are; the limited access to employment opportunities in terms of their proximity, as well as transportation costs, and the high cost of extending essential services to sites, because they are often beyond the existing urban infrastructure networks (Swan 1983).

It is suggested that groups of small pockets of land found around the city could be collectively used to overcome the location difficulty. This will also ensure that the target group continue to live in their familiar communities with their families and networks of friends. It will also mean that services can be extended cheaply. However, this approach, it is argued, may be difficult to undertake - it is not only more expensive to develop separate

pockets of land, but also the plot acquisition process may prove complicated. It is therefore important to bear the above "trade-offs" in mind in choosing the site location.

c) Scope and standards

On the issue of the scope of projects, the definition of the sites and services itself was crucial. As has been mentioned above, sites and services is customarily used to cover a variety of projects in which urban land is developed primarily for the benefit of the low-income group (World Bank 1974: 6). The Bank chose to give the strategy a wider meaning to cover both the physical product, as well as the process. The physical facilities, which are classified into essential and variable, comprise the overall components of the project design. The essential components, which include building plots for dwellings, water supply, waste disposal and means of access, are those which are reflected in all project design, irrespective of the country or city. While the variable components, which include police post, health and education facilities, community centres, sites for markets and commercial activities and recreational facilities, are dictated by the local conditions of the countries and may be excluded in some projects and included in others. If for instance, a project is located in proximity to an area where these facilities already exist, there will be no need to duplicate them.

Other variable components include, the core unit in addition to the building plot, provision of credit for building materials and technical assistance.

The design standards aspects of the projects is very difficult to deal with. Several "trade-offs" may have to be made between the various objectives of the projects. For instance, smaller plot sizes may be acceptable in the context of a higher level of service and employment opportunity. The setting of overall standards should be guided by the maximum cost that can be afforded, which depends on the income levels of the target group, and by the amounts of subsidy that can be justifiably included. This depends very much on the local situation. For this reason an ad hoc approach is preferred in determining services standards for the projects. The project location is another crucial element in the success of the sites and services. Poor locations may lead to a total rejection of the project by the groups for which it was intended, as had happened in earlier projects the Bank pointed out. Therefore care must be taken in the location of the sites relative to

commercial and employment areas where most of the beneficiaries may be getting their daily bread. A remote location implies a high cost of transportation to and from the work places of beneficiaries, which may upset the benefits of the project. On the other hand, it is a well known fact that suitably located land is difficult to acquire on the scale required by the sites and services projects, and acquiring small parcels at different location is not cost effective and difficult to administer.

Also in choosing a location for the projects, the Bank stressed that other factors like the availability of off-site infrastructure (water supply, electricity and sewage disposal system) large enough to accommodate the new development, and the physical characteristics of the land, which also may have cost implications, have to be taken into consideration.

d) Planning for cost recovery and replicability

Cost recovery is one of the major principles of the World Bank assisted projects. It is envisaged that if the cost of project, are fully recovered, they may be self replicated into larger programmes.

In planning for cost recovering, consideration should be given to the real cost of the project as well as the ability and willingness of the target group to pay for them.

In calculating the real cost of the projects, all costs should be identified, including hidden subsidies.

Also, in determining the ability of a target group to pay, care must be taken as to the method to be used. Income data are often used, but have proved to be unreliable in many cases due to problems of understatement of income by the low income and overstatement of poverty by the higher income (Swan 1983).

Expenditure levels may be more relevant in determining the ability to pay in this type of housing project. Where income levels are used, care must be taken to take into account all incomes of households including gifts, transfers or donations which in some cases will substantially increase their ability to pay.

Consideration must be given to the availability of personal savings. This is particularly important in projects where down-payments, or substantial initial investment are required from target groups.

The estimate of the monthly payment by the beneficiaries of the project has a serious impact on cost recovery. If the estimate is too high for the target group, cost recovery may not be realised. The general estimate used is 20 - 25% of an individuals income. This has been found to be unreliable, because in many developing countries the low incomeed are often not able or willing to invest so much of their monthly income in housing.

It is also important to remember that the low income group in sites and services projects will not only be making monthly payments but will also need money to purchase required materials and labour for developing their plots.

If the real cost of the project is carefully calculated and its affordability to the target group properly estimated, there should be differential land values which will relate to the locations of plots as well as the difference in standards of development. It is envisaged that higher rates charged for better located plots, plots with superior services and industrial land use, will create a surplus which can be used to provide subsidised underpriced plots to the poorest groups.

Other issues like the proper co-ordination of project activities by all the agencies involved, the occupation of plots by allottees, and the proper design of collection procedures, should also be taken into consideration in planning for cost recovery.

e) Community participation, employment generation and self-help

Community participation is very necessary to ensure co-operation between beneficiaries and project agencies. Also the more people are involve in the planning and implementing their project, the more compatible the project would be to their needs.

Employment is one of the basic purposes of the sites and services projects (World Bank 1974: 13) and will generate income.

The idea behind including an employment component in the design should be to help the families improve themselves economically. This should place them in a better position to pay for their units, make some savings and also gradually develop the size and quality of their shelter (Swan 1983).

Investors should be given opportunities to develop an industrial estate within the project which would generate employment opportunities for the locals. Swan (1983), pointed out that when offering attractive opportunities for industrial entrepreneurs, there should be linked to a guarantee to draw the majority of their labour force from the project community.

When designing for self-help, care must be taken to also involve technical officers. Families may need technical assistance in the design and construction of their houses. The technical officers and the target group should both contribute to the design process. This should make designs more practical and user acceptable, thereby minimising waste.

ii) Project financing

The total project cost include both the capital and the current cost. The cost of all the various components must be estimated appropriately, even where the land is publicly owned, its real value must be represented in the cost estimate. The difference between its public value and market value will be part of the government's contribution towards the cost. There is a lot of controversy centred around the valuation of land, so, for this purpose, in the sites and services projects, the World Bank generally excludes the land cost from the items it is prepared to disburse as part of contribution (World Bank 1974:15).

The total cost of the projects is normally shared between the public, private sector and the beneficiaries. The full cost of public services like health centre, schools, off-site infrastructure, primary roads, street lights and extension of trunks mains (water, electricity and sewerage) will be borne by the public authorities as part of the routine urban services. On-site elements like paths, secondary roads, on site provision of water, sewerage and electricity should be apportioned between the public authority, private sector and the

settlers in proportion to their respective areas of land. However, both the capital cost of individual connections to electricity, private water taps and sewerage are borne by the users only. The size of the charges in this case will be differentiated according to the level of services available to each individual plot. Care must be taken to make the charges consistent with the income of settlers to ensure they are able to pay, and that the low income should not be treated unfairly in their payment for services. It was also stressed that elements of subsidy should not be so large as to jeopardise cost recovery, and hence replaceability of projects, or attract higher income groups to displace the target group (World Bank 1974).

In their guidelines for cost recovery, the World Bank outlined the following two methods of recouping capital cost from the beneficiaries: (1) through an initial down payment, (2) then amortisation of the remaining costs over a period of time at an agreed rate of interest. Care must be taken with both the amortisation amounts to be set as well as the initial down payments, for they will both have implications on the outcome of the project. For instance, too high a down payment will mean too little money left over, and plot development might be delayed. So before the amount is set, the size of the savings available to households, the level of incomes and the total expenditure needed for plot development must be considered. The amount is usually set at between 10-20% of the target group's income, in the majority of projects. The period of amortisation of the loan is also an issue to be carefully considered. A short period will mean a high rate which may be a burden on the poorer households. On the other hand, a long period which is more favourable to households will mean a delay in cost recovery and re-investment on similar projects. Generally, a period of 15 - 20 years is recommended.

The total cost of the initial investment in the project is contributed partly by the World Bank, and the partly by the recipient government. The Bank usually disburse its loan through a Development Bank, Building Society or any equivalent institution in the receiving country from which individual settlers will receive a loan for plot development.

Contracts for the design, planning and construction of infrastructure will normally be awarded to local consultants and contractors. For this purpose, only local contractors will normally be invited to bid for the contracts.

iii) Project organisation

As a starting point, the Bank considers the creation of a project administrative unit to initiate and control the operations of the project as a basic requirement. The existing Housing Ministries and agents, can not be trusted to handle these projects efficiently due to the inherent institutional constraints and bureaucracy within the system (World Bank 1974). Other project organisational arrangements should be made according to the local requirements, and some should be left optional. One argument is that the management and construction of projects, beyond the basic infrastructure and community services should be left to the settlers entirely, because it is believed they will be able to organise these matters themselves and can find the lowest cost solution. While others argue that an administered organisation will be more efficient in the use of resources and be more innovative.

The three major stages at which careful planning and organisation are needed are: (1) the pre-construction stage when the land is acquired and the target population selected who may be mutually involved in discussions towards the planning of the projects; (2) the physical construction stage when the land is levelled and provided with services, community facilities and core units, where necessary; (3) the plot development stage when the actual construction of houses by the plot allottees takes place, this is the consolidation stage. A progressive development over a period of time is usually recommended. However, it is recommended that allottees put up temporary units to enable them to move to the project site while they build the permanent one.

2.2.3 Evaluation of the World bank assisted projects

From the above discussion, it is concluded that the ever growing low income housing problems in the developing countries and lack of effective policy response to tackle them, had led to the adoption of the Sites and Services approach. It was also shown that the World Bank had in the past two decades, become very involved with this housing strategy, its main role being that of providing the financial assistance and encouragement for the adoption and implementation of the strategy by the various governments of the developing countries. The Bank's continuous involvement has, in recent years, led to a growing interest from researchers and evaluators (Onibokun 1990). This curiosity has given rise to a wide ranging volume of literature on this approach to housing the low income especially in the developing countries.

Evaluators of these projects are interested to know how effective they have been in solving the housing problems of the low income. The leading evaluation studies in this area are the ones sponsored by the World Bank and conducted by its Officials. This section discusses the summary of the evaluation findings of the Bank assisted projects. It starts by briefly discussing the concept of evaluation, which is meant to give an understanding of the definitions, purpose, and techniques used in evaluating housing development project. It also identifies the common methods used for evaluating the World Bank projects and chooses the appropriate one for this study. The second part of the section discusses the summary of the findings of some of the leading evaluation studies the World Bank assisted projects.

2.2.3.1 The concept of evaluation

Different writers define evaluation in various ways depending on the focus. For instance, while House(1987) simply defines evaluation as any study that leads to a judgement about the value of an action, Posavac and Carey (1983) defined it more comprehensively as "collection of methods, skills and sensitivities necessary to determine whether a human services actually do help the people in need." Rutman (1985) on the other hand defined evaluation as any study which uses scientific methods to measure the implementation and the outcome of a program for the purpose of decision making. Though these definitions vary in scope and focus one thing common to all is the idea of putting a value on an

action. The way by which an evaluation study is conducted will vary according the purpose.

2.2.3.2 Purpose of evaluation

An evaluation study may be undertaken for various reasons, the commonest of which are, administrative and managerial, accountability, the extension of knowledge, and political benefits. From the point of view of administrative and managerial reasons, an evaluation is viewed as a tool for making an improved decisions on planning, design and implementation of a policy or program. The management will want to know whether a programme is being carried out as planned, what factors impede the implementation, whether the benefit of the project go to the right group of people and whether a particular intervention is the right solution to the problem posed. The study of this nature will aim at identifying ways of improving the effectiveness of subsequent programme. Most of the World Bank's projects evaluations studies fall into this category. Also the results of such studies help the administrators make informed decisions on whether to expand, curtail or even terminate the programme. At the preliminary stage, it can help to choose between alternative options to achieve the same results.

An evaluation study, which is conducted for the purpose of accountability will aim to find out whether the benefit of a programme is worth its cost. This purpose has become increasingly more important in the world of scarce resources and competing demands. In countries like the United States, for instance, all government programmes must be accounted for in order to get continuous political and financial support from both the public and the congress. Even in the Third World countries, some aid agencies like the World Bank insist on the accountability of previously assisted projects as a condition for future lending.

An evaluation study can also be conducted for the purpose of knowledge only. A knowledge oriented study may not be put into immediate use, however it adds to the stock of knowledge in a particular field which can be drawn on when the need arises. The design of such studies is very academic in nature, and is usually intended to answer questions about a particular problem, or test a particular hypothesis, a professional practice principle or theory underlying certain policies.

When an evaluation is undertaken for a political purpose, the aim will be to try as much as possible to boost the image of the actors (politicians). They will hope to gain more support from the public by demonstrating through evaluation studies that the policies they implement are working and worthwhile.

On the other hand, an evaluation can also be conducted on the same policies by the opposition to the government to discredit them or sabotage their programmes. An evaluation conducted for this purpose can hardly ever be objective, and therefore defaults the rule of a good evaluation study which Posavac and Carey (1980) stated must be as objective as possible, with results that are very consistent so that when repeated by other researchers the same results are obtained.

2.2.3.3 Methods and technique of evaluating housing development projects

Many experts feel that an evaluation should be the beginning and end, and through appropriate monitoring techniques it should be a continuing process, not simply one stage in an over-all programme. This implies that evaluation studies can be undertaken at different stages of a programme or project. The different stages can be grouped into four main types: ex-ante, monitoring, process and ex-post evaluation studies.

i) Ex-ante evaluation

Ex-ante evaluation is undertaken before a programme is designed and implemented. It is aimed at giving information about the extent of, and distribution of, a problem; the need for an intervention; the type of intervention needed and the expected impact of a particular program. Also through analysing the cost and benefits of all alternative proposals, the planner is able to make the best choice. This type of evaluation study will also give the planner the information that will enable him to make recommendations on the most effective ways of implementing the programme or project. As useful as this evaluation seems, it has the major disadvantage of not being able to predict an unexpected impact which may result from implementation. Some of the techniques used include cost benefit analysis, appraisal studies, impact analysis.

ii) Programme monitoring

Monitoring is a type of study undertaken during the implementation of a project or programme. It is designed to give feedback on whether the project's implementation is proceeding the way it was designed to in terms of technical, budgetary, staffing and time schedules. It will also give information on whether the right target groups are being reached. Any drift in the original plan is easier to rectify while the programme is still going on. It might be too late to rectify when the programme is completed. Monitoring studies will also reveal the use to which project inputs and benefits are put and give feedback on the reaction of the recipients to the project. This type of information may be used to predict whether a project/programme will succeed or not. Monitoring, therefore, is an essential tool in avoiding failures in project implementation and also in realising whether certain aspects of project are not implementable (Casley and Lury 1983). Some of the techniques used for monitoring studies include; programme evaluation review techniques (PERT), Critical path technique and project performance tracking.

While this type of study is easy to conduct, and in most cases involves only the day to day progress report of the implementation process, one of its major disadvantages is the fact that it is in-built into the project and therefore only undertaken by the project or programme authorities. To get continues political and financial support, the management may concentrate only on showing the good aspects, while hiding the failures. Secondly, due to lack of adequate technical facilities for analysing data, especially in the Developing Countries, results may be delayed and rendered useless from the point of view of feedback. Closely related to project monitoring is process evaluation.

iii) Process evaluation

This type of evaluation is very similar to programme monitoring, they are both undertaken while implementation is still going on. The major difference being that while a monitoring exercise is a day to day report of a progress of a programme undertaken by the programme management, a process evaluation is an assessment of the programme's performance undertaken either by the project management or an external body. Process evaluation is designed to study the process of events and their causes, it also tries to find out the series of events that have lead to the disparities that exist between intended and

realised programme goals (Levin 1984). The information from a process evaluation study is also used for feedback, which is its major advantage.

Its major disadvantages include the following: (1) since it is usually based on general development criteria, it is not of much help in identifying the particular interventions that accounted for success or failure; (2) the impacts of programme or project on a particular group can not be easily determined using this type of evaluation; (3) the evaluation could mask or underestimate the effects of certain interventions (Young 1983).

iv) Ex-post evaluation

This type of evaluation, which is undertaken after the project or programme is implemented, is meant to assess its outcome. It is usually designed as an impact assessment, looking for what differences the project has made to the situation, especially for the target groups, whether they are better off or worse off with the programme and what are the positive and negatives effects are. It can also be designed to discover the level of delivery achieved, whether the objectives of the projects have been achieved, whether they are appropriate and what the actual situation of cost and benefits is. Information from such studies will be used in planning and implementation of future similar projects and expanding the scope or coverage of completed ones. There are several approaches to ex-post evaluation studies. One of the most commonly used is the goal based approach which is used to determine whether and to what extent, a programme has achieved its stated goals and to what extent it hasn't. The criteria for success or failure will be the stated goals because the difference between the stated and the achieved is the level of success or failure. A second approach is the system analysis approach which measures the outcome and is related to variations in programme. It will seek to find out whether the expected effects have been achieved, and if this achievement was the most economical way. Some of the techniques used with this approach include cost benefit analysis, planning balance sheet and linear programming. Another approach is the case study approach which attempts to describe the project or programme performance as viewed by the participants. The usual techniques here is a field study, which would include conducting interviews, site observation and administering of questionnaires to participants. Other approaches to ex-post evaluation studies less relevant to housing

projects include the decision making approach, and goal-free, art-critic, the professional review and quasi-legal approaches.

One of the major disadvantage of the ex-post evaluation is the fact that results can not be fed back into the same project. Furthermore, not all findings will be relevant to other similar projects because of the variation in the of circumstances.

It is important to note here that most of the World Bank evaluation studies reviewed above are ex-post in nature and use the goal based approach whose main focus is to measure the extent to which the stated goals were achieved. Most of the goals stated in form of physical products were the objects of assessment. The successes and failures of the projects were measured by the achievements of mainly the physical objectives irrespective of how, and by whom, they were achieved. This refers to particularly to the plots allocated in the Bank's project, level of services provided, and quality and quantity of housing units built. This is shown by the summary of findings of the Bank's evaluation in the next subsection.

2.2.3.4 Summary of findings of the World Bank's projects evaluation

In discussing the evaluation findings, an attempt has not been made to discuss individual projects in details, instead general aspects of the projects performance indicators were used as guides and example of the extent of performance or lack of it are drawn from the individual projects.

The assessment of the performance of the projects are discussed under the six major aspects which are: achievement of physical objectives; affordability and accessibility of projects to the target group; impacts of projects on quality and quantity of housing; impacts of projects on employment, income and expenditure and the efficiency of project implementation. These aspects have also been identified as the specific objectives of these projects by their planners.

2.2.3.4.1 Achievement of physical objectives.

The level of achievement of physical objectives varies from one project to another, but the general reports are impressive. Keare and Scott (1982) in their evaluation of projects in four countries (Zambia, El-Salvador, Philippines and Senegal), reported that most physical objectives have been achieved. For instance in the San Salvador sites and services projects, as at 1980 when they conducted the study, 4,348 (60%) dwelling units were completed, out of which 3,540 were occupied, and a further 2,246 were at different stages of construction. Secondly virtually all project participants received both plot and material loans. Four out of five storm drain drainage systems were installed, five out of eight foot paths and five out of six trunk water supply systems were completed and one out of two proposed sewage system was installed.

Similarly in the Lusaka (Zambia) projects, as at 1980 (when the study was conducted), about 98% of the infrastructure and services have been achieved, about 19,000 (nearly 100%) families have been served with stand pumps, roads, and security lighting in the upgraded area, and about 5,500 plots have been developed and allocated in over-spill areas, and 2,590 in sites and services areas, i.e. over 80% achievement. However this achievements are not very consistent because there was a short fall in the provision of community facilities, due partly to the problems involved in land acquisition which have delayed implementation leading to cost overruns due to inflation, making it more difficult

for the projects management to provide all the facilities as planned. Also, the communities questioned the need for some of the facilities. A construction of a market was reported to have been stopped in Lusaka for this reason. Even the Philippine project, which was not completed at the time of this study showed a remarkable progress towards the achievement of its objectives it was reported.

The Kenyans projects were also remarkably successful in achieving physical objectives. Kayila (1980) reports that at the end of phase one of the Dandora community development project, about 90% of the plots had been developed and in the second phase, despite rise in costs rise due to inflation, about 88% had also been developed. Provision of services was also impressive. Nine out of ten families were provided with access to piped water, roads, electric networks and community facilities. Despite the reported delays in the implementation due to the controversy over the application of existing building bye laws and public health rules and also conflicts between local political leaders and Housing Development Department officials, the overall achievements were very impressive (Smith and Memon . 1988).

Similarly, in their evaluation of 24 World Bank assisted shelter projects, Richard Ludwig and Shabbir Cheema (1987) reported that most physical objectives have been achieved. For instance, in the Lahore walled city phase one project, which was completed in 1984, all laid down targets have been achieved. Some of the tasks undertaken included the provision of 9,200m of water mains, the replacement of 2,700 water connections, the provision of 18,500m of sewerage pipe, re-paving of 20,500 square meters of streets and the provision of street lighting covering an area of 20 hectares.

However, it is important to note that the Senegal projects are exceptions to this success story. Most physical objectives had not been achieved at the time of study. The failure was said to have been due to the following: (1) over ambitious design standards which neither the government nor the participants could realise, (2) problems of land acquisition which delayed take off of projects by nearly two years thereby raising their cost due to annual inflation, making it more difficult for both the government and participants to achieve their objectives; (3) delays in provision of basic services which rendered sites unsuitable for years after projects had commenced; (4) projects were located on remote sites making

it difficult for the poorer households in particular to consolidate faster, because of the cost of transporting themselves and building materials to the site was too high. The problems in Senegal were so unique that drastic measures had to be taken before any progress was observed. The whole project had to be redesigned and contractors appointed to handle some of the work of the projects. (Keare and Scott 1982).

Similarly, the progress of the Chaani (Kenya) sites and services projects was less impressive because the start was delayed for many years. As at 1984, no beneficiary has been issued an occupancy certificate for their plots (Kayila 1980). In this case, land acquisition seemed to be the major hindrance in achieving some physical objectives. Therefore it was recommended that governments should keep a land reserve for housing development. They should acquire the land through purchase or expropriation well in advance of projects.

2.2.3.4.2 Affordability and accessibility of projects to the low income group.

Whether these projects are affordable and accessible to the low income groups, for whom they were intended is a major concern to researchers and evaluators. Though the findings of the studies already conducted were mixed, the general evidence on most projects suggests they are not affordable to the intended groups. In both El Salvador and Zambia, the projects were said to be affordable to the target groups (Keare and Parris 1982) because the indicators of lack of affordability were either not present or did not have any significant relationship with incomes as shown by the studies. For instance, in the El Salvador study, the turn over rate in the project area was not significantly higher than in control area , also there was a very low level of defaults of payments of both instalments and charges (Keare and Scott 1982). The Lusaka projects on the other hand experienced a high rate of default of payment of instalments (80%) but the study showed no significant relationship between this rate and the income of beneficiaries. i.e. the lower income households are not necessarily the ones in default. Defaults on payments were explained by the lack of an effective collection system and political unwillingness to either force payment out of beneficiaries or impose sanctions on the defaulters for fear of losing popularity. However, these results should be treated with caution because it could have serious implications on the income composition of the actual beneficiaries. The project

management in El Salvador also expressed a concern that the lowest income target groups might not have been the actual beneficiaries of projects (Keare and Parris 1982), because more middle income households were allowed to participate to the detriment of the lower. A similar situation occurred in the Senegal Projects.

The Dandora Community projects in Kenya were also said to have been raided by a middle income groups for whom the projects were affordable. The middle income groups were said to be using renters from lower income households as a source of extra revenue, so they could afford to pay their charges promptly. In both the Philippine and Senegal projects, lack of affordability was clearly indicated by the studies. A socio-economic survey of the Tondo upgrading projects in Manila, for instance, showed that households were neither willing, nor able, to spend up to 20% of their income on housing, as the project assumed. Similarly, few of the squatters were re-housed in the Kuala Lumpur low cost public housing, while many of the Sites and Services schemes remained vacant because the squatters could not afford the improved lots (Ludwig and Cheema 1987). Also in the Senegal case, the affordability problems were indicated by a very high dropout rate and a very slow pace of construction and consolidation. This has been explained firstly by the lack of clear guidance and technical assistance directed to building houses consistent with the means of the target population. This has led to participants undertaking high and costly construction standards with which they could not continue.

Secondly, lengthy delays in the implementation of projects due partly to the land acquisition problems mentioned earlier, have raised the cost of participation in the project through the annual rise in inflation beyond the means of most initial target households (Keare and Parris 1982). By and large accessibility and affordability of the World Bank assisted shelter projects still remains a problem due to the following reasons: (1) the high standards in both the services provided, and the construction of the houses insisted upon by government agencies, has made the participation of the poorer target groups more difficult; (2) the remote locations of most of the sites and services projects, where, the cost of living away from their job location (city centre) is too high especially for the poorer members of the target groups; (3) the lengthy and complicated bureaucratic procedures may have discouraged some households and made them withdraw from participation, application forms for instance, were reported to have been mostly in English which most

households could not read (Sanyal 1982a); (4) screening procedures are often not reliable and are open to corrupt practices at one level or another (Swan 1983:121); (5) improper definition of income might lead to the elimination of eligible households from the selection stage (Keare and Parris 1982; Bamberger et al 1982a); (6) many allottees either abandoned or sold out their plots to the middle income groups because they could not afford to continue with the projects; (7) wrong assumptions regarding the affordability of target beneficiaries could be a contributory factor.

The conclusion from these studies is that: (1) the affordability for the World Bank assisted Sites and Services project will remain a major problem for the low income group; (2) the upgrading component, have been found to be more affordable to the poorest group than the sites and services component in the majority of the projects evaluated. However it is also important to note that, the benefits of the upgrading are accrued more by the home owners in upgraded settlements than the renters who had to pay higher rents to remain at the improved area, or be forced to move on to poorer areas.

Some of the strategies for increasing affordability and accessibility of projects to the lower income households suggested by these studies include: the lowering of standards; introducing some elements of cross subsidy for the benefit of the lower income groups and the use of more accurate methods of calculating affordability.

The findings have also shown the importance of a proper definition of income in the calculation of affordability of the projects. It is recommended that total income (i.e. earned plus extra incomes from gifts and transfers), rather than only earned income, should be used in the calculation. This is because transfers and gifts were found to be a significant proportion of the total income of most households. In El Salvador, for instance, the proportion was said to be up to a third in some cases (Keare and Parris 1982). This was found to be even more significant for female headed and unemployed male headed households. Most of these strategies have been adopted in the second and third generation projects.

To prevent the displacement of poorer households from upgraded areas, basic services should be provided without rationalising housing, subdividing and selling land or

reducing the density of the community to a certain acceptable standard (Laquian 1983). This has been tried with success in the Indonesian Kampung improvement programme. Another important factor to be considered in the accessibility of projects to low income groups is their location. The evidence from the study by Ludwig and Cheema (1987) suggests that the location of a Sites and Services project has a bearing on its accessibility to the low income. Where a project is located away from the centre of employment opportunities, the project participants may not be from the poorest group. For instance, the Rangsit Sites and Services Project in Thailand, which is located at a distance of two hours bus journey from the centre of Bangkok was meant for low income families earning less than \$75, but by the middle 1980s, more than half of the participants were found to have incomes above the maximum planned.

However it is interesting to note that despite the reported lack of affordability and accessibility of projects to the target groups, there is a good record of improved access to services and community facilities to the target group resulting especially from the upgrading projects.

2.2.3.4.3 Access of the target group to urban services

Increased access of the target population to services has been remarkable in most projects. This has been assessed by comparing project areas with control areas. For instance, the study of three squatter settlements similar to projects areas in El-Salvador, revealed that all had inferior access to basic services like water supply, sanitation and lighting (Keare and Scott 1982). Also the mean travel distance to facilities like schools, clinics, playgrounds and parks has also reduced. In the Tondo upgrading projects, access especially to drainage and sanitation has increased greatly. It was reported that within a year, the population using water sealed toilets has increased from 38.5% to 45.8%, the percentage of houses without drainage has decreased by almost 50% (Keare and Scott 1982). In the Lusaka project, access to water supply was most impressive, before the project, only 14.5% had access to good sources of drinking water in both Matero and George areas, but after the project, the percentages rose to 98% and 98.4% respectively. (Hamburger 1980).

However, these results are not consistent. In the Tondo project in Manila, beneficiaries expressed dissatisfaction with the lack of electric and water connections to their houses, while in Lusaka, the main problem was dissatisfaction with transport and health facilities. A survey of the beneficiaries showed that 58% of the households interviewed thought their access to health facilities has worsened by the project, 32.8% thought there was no significant change, while only 9% thought they had improved access. Similarly for transportation over half of respondents thought they were worse off in terms of access to transportation, only 5.8% thought they were better off. Apart from the isolated cases, generally speaking, in most projects, access to services for the target population has increased. The major dissatisfaction in the area of infrastructure facilities, like transportation and clinics, was seen more in the sites and services than in the upgrading projects.

The improved access to the services and community facilities might have had an impacts on the health and general living conditions of the recipients. Although it is extremely difficult to trace health improvement to a particular intervention in most of the projects evaluated, a sharp decline in ailments associated with bad water supply and sanitation was observed. Even though statistical techniques have failed to relate the improvement with the project intervention, it is generally believed they might be related. Moreover, the increased access to clinics in many communities, due to project intervention, means that medical attention could be received earlier and people are more enlightened about preventive rather than curative methods, and environmental rather than disease aspects of health which most of the programmes emphasise (Laquian 1983). One major difficulty in accessing the health impact Laquian (1983) has pointed out is the fact that evaluations are usually done over a short (2 to 3 years) period, while health impact takes longer to manifest itself.

2.2.3.4.4 Impact on quality and quantity of housing

It was reported that the quality of housing in the low income areas has improved with the project (Keare and Parris 1982; Bamberger 1983 and others). In the upgrading areas, the security of tenure has led to more investment in housing and thereby improvement on dwellings (Santiago 1982). This was evident from both the level of services provided and the high quality materials used. The improvement of quality has led to appreciation in the value of the houses. For instance the quality of housing in the Tondo upgrading projects in Manila has increased from 60% to 85% in monetary terms (Keare and Parris 1982). In the sites and services projects too, it was observed that most houses were built of a higher than expected quality of building materials. For instance in the Lusaka and Manila projects, 90% and 85% of houses respectively were built of concrete block (Bamberger 1980; Keare and Scott 1982). A survey of the households in the Manila projects also showed that many households expressed their satisfaction with the increased space around their houses for gardening as compared with the low-cost houses where they use to live. These results, though desirable, could have serious implications for the affordability and cost recovery of the projects, bearing in mind that the affordability calculations were based on the assumption that beneficiaries were to use locally produced and cheaper building materials for building their houses. It could mean one or more of the following: (1) the present beneficiaries, who built the houses, are not the target group, they are from a higher income group, which is why they could afford to built with expensive materials, (2) because of the high demand for good housing by the target group, this has led them to borrow money from other private sources to supplement their loans and build more expensive houses, the problems of which would be seen in the cost recovery, when the private money lenders will put more pressure on households to pay their debts to the detriment of the projects management, (3) the project planners miscalculated the affordability of the housing to target population by not including their other sources of income, like those mentioned earlier. The implications of this are that many households, who otherwise could afford to participate in the project, might have been denied participation because of the faulty calculations. Although most of studies seem to dwell on the latter explanation, others explanations could have relative importance in some projects.

Housing stock, no doubt has increased with the projects, but because most of the initial projects are pilot and small in scale, the increases is not enough to satisfy the ever growing demand in majority of cases. Continuous increases in quantities to offset demand can only be made by expanding these projects into large scale programmes. This was supposed to be done through project self replication according to the World Bank, but the prospects for this so far are very slim as many evaluation studies have shown.

2.2.3.4.5 Impacts on employment, income and expenditure:

The expected impact on employment from these projects was the absorption of surplus labour, in construction through self-help and shared labour, with the assumption that unemployment rate was high in the majority of the project areas. The project were also to set up sites for industrial and commercial establishments, giving out loans to small businesses and providing technical assistance to beneficiaries to acquire some skills (Laquian 1983).

But contrary to these expectations, majority of households were found to have regular and well paid jobs, which they were better off doing rather than engaging in self construction of their houses (Keare and Parris 1982:75; World Bank 1980b:21; Jimenez 1980:113). A survey of unemployment in Zambia, for instance showed rates to be very low in projects areas, 1.3% in Matero; 2.4% and 2.7% in Lilanda and George respectively (Bamberger 1980). Setting up industrial and business establishment on site, was not successful in many cases, because entrepreneurs were not attracted to them. In the Lusaka sites and services project, for instance, of the 100 commercial plots set up, only 31 were taken up, of which, only 13 had started any construction at the time of study (Bamberger 1980). This was due partly to a lack of availability of business loans, high cost of building, remote location of sites, discouraging many people, and poor insufficient advertising techniques for stimulating interest (Keare and Scott 1982). A three year study of change in employment status in El Salvador, comparing beneficiaries and control groups, showed no differences for the household heads.

An increased involvement of spouses and other family members in active work has been observed in projects areas. This could be due to the increased expenditure of households on housing as a result of project repayments as Leucine (1983) has suggested.

By and large, projects did not seem to have any significant positive impacts on employment. Negative or destructive impacts, were however, observed in some sites and services projects, where hawkers and vendors were dislocated, disrupting the delicate seller buyer relationships which they had established over a long time in the community based on mutual trust (Leucine 1983). Research in Delhi also revealed that the opportunities for side jobs for family members other than the bread winner had diminished substantially after relocation to sites and services projects, while the financial burden on families had increased as a result of projects' monthly payments (Misra and Gupta 1981:89). Also in the El-Salvador project, it was shown that the increase in the flow of incomes of the project beneficiaries(75%), is similar to that of a control group(70%) (Bamberger 1980). It is important to note that, though there had been little increases in incomes flows, steady rises in expenditure on housing in the same period, for the majority of families in the project areas were observed. In Manila project, for instance Laquian (1983) reported that, a rise of expenditure of upto 170% was observed, of which 64% was on housing. Since project did not lead to a corresponding rise in income, it means that families were spending less on other needs like food, medicines and clothing which could lead to deterioration in their nutritional and health standards.

However, the Dandora project appeared to be an exception, because available data shows positive results concerning employment and income generation. For instance, in the sites and services projects, families have been found to gain substantial amount of income from subletting spaces in their units. Also housing construction has been found to generate employment and income to the hired builders. (Bamberger 1981).

I.2.2.3.4.6 Efficiency of projects implementation.

For all development projects, the efficiency with which they are implemented is a key factor in determining whether they will be successful or not. In most of the World Bank assisted projects, "eight aspects of the projects which have particular financial, economic and social importance " have been examined in evaluating the efficiency of the implementation (Keare and Parris 1982). These are project planning and design; selection of project beneficiaries; construction methods; construction material loans; housing completion and occupancy; maintenance of housing and infrastructure; cost recovery and

community participation. The findings of the evaluations, their implication and recommendations on each of the aspects are discussed below.

i) Planning and design: There are a number of ways by which the planning and design of a project can affect the efficiency of its implementation. Very high design standards, for instance, can limit the participation of the low income target group and the slow consolidation process. This was the case in the Senegal projects. The design standards were over ambitious neither the beneficiaries nor the government could support them. The progress of the project was therefore halted until the design standards were revised (Keare and Parris 1982). Also, if designs are rigid, especially in terms of the material to be used, implementation may be delayed if the recommended materials are either not available in the required quantities or too costly for the target groups to purchase. If progressive development was designed to be very slow both the administrative and the consolidation cost will increase, leading to cost overruns and reduced project inputs such as materials loans and level of services. The combination and level of services designed in the projects also, may not be that preferred by the beneficiaries, especially where they are not consulted before the design is decided on. For instance, in both the Philippine and Zambian projects studied by Keare and Parris (1982), findings show that participants expressed a desire for more space than the project provided, preferring this more than the improved services like toilets which the project management attached more importance to. Some families have demonstrated this by building an extra floor following the reblocking in the Tondo upgrading project in Manila. The desire for more space has also been demonstrated by the beneficiaries in the Senegal project.

ii) Selection of beneficiaries: The manner by which the selection of beneficiaries of a project is conducted can also affect the efficiency of its implementation in a number of ways. (1) A very slow selection and screening procedures can discourage some families and lead to their withdrawal from participation, on the other hand very hasty screening procedures can lead to costly mistakes, to the detriment of some families (Keare and Parris 1982). For example, if the project management do not take time to clarify information given on application forms, their selections may be based on false evidence.

(2) Faulty selection may also result where selection criteria are not properly defined. For instance, in the Zambian project, the income criteria had to be modified twice because the initial upper and lower limits were found to be unrealistic under the circumstances existing in Lusaka at that time. (3) Selection procedures are an aspect of these projects that can easily be manipulated during implementation. These manipulations are usually done to the detriment of the target groups, as was reported to have happened in the Kenyan projects. The selection procedures have been changed in favour of the participation of more middle income households.

iii) Construction methods: Several methods of construction, which have different implications on cost, speed and quality of house construction, are available. These are: completely contracted house building; building by mutual help; self help in which families hire contractors; self help in which a family hires labour and supervises the construction personally and self help in which families use their own labour for the entire building work. The World Bank projects, which place emphasis on reducing the cost and increasing the affordability, recommended the use of self help and mutual help types of construction methods which will use free labour for the construction. Evaluation findings show that the hired labour housing construction method was most commonly used (Keare and Parris 1982; Bamberger 1980; Sanyal 1981 and Smith 1988). The recommended methods of construction were not used in most projects for a number of reasons. Firstly, projects participants were mostly in full time employment and therefore did not have time to engage in either self help or mutual labour, so they hired labour to build their houses. This means that the original assumptions of the projects regarding unemployment were wrong, as discussed earlier. Secondly, most participants did not have the technical know-how to engage in self help construction methods. Technical assistance was suppose to be one of the projects' inputs, but the project management in most cases did not pay much attention to it. If project management had devoted time to giving participants the necessary technical assistance, they would have also had the time to use the skills they acquired to build their houses. Thirdly the desire to have high quality houses, which most families believe can only be achieved through the employment of skilled work men, has pushed them to use this method. This desire was expressed more by families who intended to

sublet their property, because the better the housing quality the higher the rent demanded from prospective tenants. Fourthly, It takes longer to complete a house using self help and mutual labour, so most families prefer to hire skilled labour for speedier completion of their houses. This has led the World Bank to redefine the concept of self help from self construction to self-management (Van Der Linden 1986). This is in line with Turner's definition put forward more than a decade earlier. However, self construction is not to be dismissed because it is still very significant especially among the poorer members of the target groups. For instance, in Zambian project families earning less than 100 kwacha hired labour for only 15% of their construction work, the rest was done by either self help or mutual labour.

iv) Building materials loan : In most of the projects, building material loans have been made available to beneficiary households in addition to the serviced plots. The nature of the loans and the manner in which they were conducted varied from project to project. But generally in earlier projects, like those of Lusaka and El Salvador, material stores were run on site, and loans issued in the form of vouchers redeemable only in the site stores. The evaluation findings revealed a lot of problems encountered in using this system. Firstly, the lengthy queuing time necessary to obtain materials from the store. In the Lusaka project, for instance, some families had been to queue for up to 20 hours. to be served (Bamberger 1982). This was partly due to the shortage of staff to run the stores and the lack of adequate and continuous supply of materials to the stores, during projects the implementation period. Secondly, many families were forced to use the materials provided by the store against their will as they could not redeem their vouchers anywhere else. In the El Salvador case, it was reported that many families had expressed their preference to use both hollow block and asbestos roofing sheets which the site stores did not stock (Keare and Parris 1982). However, in the later projects this system was changed, and in the new system loans were in form of cash and material stores rarely existed. The cash loan system have also been reported to have been faced by a number of difficulties, particularly relating to its size and accessibility to target group. Some findings have revealed that, the material loans were too small and insufficient in most cases. They offered t offered just a marginal contribution to the construction, especially for those who

used expensive materials. Furthermore, in some cases, many participants could not even obtain the loan, for example in the Philippines and the Bauchi projects in Nigeria. In the Bauchi project, up to half of the participants had not obtained any loans as at the time the Bauchi projects were completed, (Onibokun 1989). The failure to provide sufficient loans in some projects was due partly to the cost overruns resulting from delayed implementation of the projects. A cash loan means that there is no restriction as to the type of materials participants could use for construction. This could have serious implications for the affordability of the target group as many would be tempted to start building with expensive materials which they could not afford to continue to use; this would lead them to abandon their buildings. This was reported to have happened in both the Senegal project and Bauchi project.

v) Plot/ house consolidation

Consolidation pace has been reported to be low in the majority of the projects studied. In the majority of the projects, it was recommended that families move to site as soon as they were allocated plots, and build temporary structures to live in, while the permanent construction was going on. Evaluation findings showed that this pattern was not followed in most projects except in a few cases like the Dandora phase 1 project in Kenya. This was partly because the temporary materials were neither as cheaply nor readily available as the project had anticipated. This means that families had to maintain two homes during construction, paying rent on their current houses while spending on the construction of the new house. Therefore, since the rents are fixed, they can only spend so much at a time on the new house. The result of this is a slow pace of construction and consolidation which can go on for years before a house is completed and occupied. Other factors that might have affected this pace include: income; design standards; and delayed provision of services. Families from the lower income band will tend to be slower in consolidating. So in the projects where participation of the middle income groups is higher, the pace of consolidation pace is faster. Also, the design of the houses can affect consolidation, for instance in the Dakar projects in Senegal, it was reported that high design standards coupled with inflationary rise in the cost of labour and building materials have grounded consolidation process almost to a halt. The designs had to be revised and income criteria

modified before consolidation started picking up. The delayed provision of basic services in some projects has also slowed consolidation. Most families would not move until they are sure the essential services were in place. Some families would also prefer to complete their houses before moving in., because their families are too large for a half finished house. This would be more common among polygamous and extended families. Some families were also reported to have refused to consolidate, purely for speculative reasons. To improve on the pace of consolidation, in some of the later projects, wet core units were provided on every plot. For example in the Dandora projects in Kenya core units provision has quickened the consolidation process (Laquian 1983). This was demonstrated by a study comparing the pace of consolidation in two different levels of core units. Consolidation was faster on plots with a higher level of core units. Details on the extent of consolidation problem in the case study, are discussed in the next chapter (Chapter 3), while a literature review on its likely causes is discussed in Chapter 4.

vi) Community participation: The results of community participation on the efficiency of implementation vary. While in some projects management believe community participation has slowed down progress, and therefore less desirable, in others it is crucial. It was reported, for instance, that the implementation of the Lusaka upgrading projects would have been impossible without the support of the community (Bamberger 1982). A powerful community group can also be used to ensure maintenance of infrastructure and community facilities and collection of charges from households if it is involved early in the project. On the other hand they can also jeopardise cost recovery if they decide to collectively stop payment of charges when they are not satisfied with the services provided. Community group leadership, however, is characterised in some cases by a lack of representativeness of the whole community, it often represents particular interest groups. However, because of the obvious advantages of community participation, both the World Bank and other agencies has given it more emphasis in recent years (UNCHS 1983). But the type of participation prescribed is still very marginal in that people are involved only at the final stage, and have no control over the design and the early stages of implementation.

vii) Cost recovery : Cost recovery is one of the fundamental principles in the design and implementation of these projects. Costs are to be recovered to minimise subsidy and enable projects to replicate themselves. From the evaluation findings, the results on cost recovery vary. While in Senegal, Zambia and Philippines there was a high rate of defaults in payment, in El Salvador, the default rate was very low. As at 1980, it was only 2.3% (Keare and Parris 1982). Since no relationship was found between the rate of default and incomes, it was concluded that defaults might not have been due to lack of affordability. Reasons for defaults were discussed earlier under affordability. Other factors that may also affect the cost recovery include: the levels and rates of payment; the economic characteristics of people selected for participation in the projects; the availability of an effective collection machinery and the role played by community groups in cost recovery (Laquian. 1983). The low default rate in El Salvador was explained by the efficiency of and dedication of the foundation which managed the projects. High cost recovery records should be treated with caution because they could be due to projects missing the actual target groups. For instance, in the Karachi Metroville project, cost recovery was 97%, but this was because the target group was entirely missed (Swan 1983). Similarly the Dandora projects in Kenya were also reported to have had good cost recovery records, which was attributed mainly to the fact that, they largely benefited a middle income renter group instead of the low income target group

2.2.4 Summary and Conclusions

This chapter has reviewed the literature on the interpretation of Sites and services housing strategy, concepts of self-help and aided self-help housing including the self-help housing debate notably the Turner Burgess debate; the World Bank involvement with aided self-help Strategy; the available methods and techniques of evaluating housing projects; and the findings of the evaluations of the World Bank assisted projects.

It was clear from the review that the sites and services strategy was adopted as a result of the failure of conventional approaches to solve the low income housing problems in the Third World countries. The advantages of the strategy over conventional approaches including increased access, reduced investment of authorities in housing and greater utilisation of surplus household labour have been elaborated on.

From the self-help housing debates discussed in the first part of the chapter, it was clear that Turners view of the self-help housing has gained a wider acceptance among housing professionals as well as authorities and aid agencies notably the World. The sites and services housing strategy adopted by the World Bank in the past three decades was based mainly on Turners theories of self-help.

The findings of the evaluation of the World Bank assisted Sites and Services projects discussed in the second part, revealed that some of the major problems common to most projects include the following: problems of reaching the target groups; poor administration; the imposition of a higher standard than the target group can afford; problems of land and the location; and cost recovery and low level of plot consolidation. Each of these problems has been elaborated on and explained by the different studies in different ways.

It has also been pointed out that where very poor groups were involved, the settlement upgrading have been found to be more beneficial.

A great deal has been done no doubt, and future projects will have a lot to learn from the findings.

However there are some difficulties inherent in these studies which include the following: Firstly, because most of the studies dealt with broad and general aspect of the projects, specific aspects could not be studied in great details, therefore many questions pertaining to some aspects especially of standards and plot consolidation, still remain unanswered.

Secondly, very few independent studies exist in this area, most evaluation was done by the World Bank who are also the sponsors of the projects, the Bank's studies are essentially managerial in nature and therefore more concerned with efficiency and administrative aspects and less concerned with the qualitative and distributional effects of groups projects (Mosely 1983:596). Moreover, World Bank reports may tend to emphasise more on the successes of projects while playing down the failures to justify their continual involvement. So independent studies will be necessary to give more objective assessment of the projects.

Thirdly, due to the variation in the socio-economic, cultural, religious and housing market situation in the different project countries, there is a problem in generalising the findings. For the above reasons, and more, further empirical studies are needed in this area of housing. This study seeks to investigate the causes of the consolidation problem. To this end, the Makama project was chosen as a case study and next chapter describes the project and gives general review on the preliminary findings on its performance with particular emphasis on the extent of the problem being studied.

The process evaluation has been adopted in this study for the following reasons: firstly, the aspects on which the study is mostly interested in, that is the plot consolidation process, is not yet completed, so the results of the study can easily be feedback into the project. Secondly, the process evaluation which enables the study to find the disparities in the process of events and their causes is most appropriate for the study. The case study approach will be used involving the beneficiary group directly.

Chapter 3: The Makama Sites and Services Project -

A case study

3.0 Introduction

The previous chapter was a literature review of the nature of the research problem and its context. This chapter is a description of the Makama Sites and Services Project (the case study). The purpose of the chapter is to reveal the characteristics of the project and its area, and show the extent of the research problem at the time of study. The chapter is in four sections with the first section covering the background of the project, with a brief description of the area. The second section includes the characteristics of Makama project as planned, and the discussion of the implementation of the project with, reports on the preliminary findings on the performance of the project. The third section covers the degree of low level of consolidation in the project, with a presentation of some survey data, while the last section is a summary and conclusion.

3.1 Background to Makama project

Like many other developing countries (Kenya, Senegal, Zambia, Philippines, El Salvador, etc.), Nigeria adopted the World Bank Assisted Sites and Services Strategy as a result of the realisation that earlier projects had failed to reach the low income. Also due to the recognition that certain constraints, namely land and services, have been the major draw back to any efforts made by such groups to provide for themselves (as already discussed in chapter 2). This strategy, aimed at making affordable land and services accessible to the low-income, could not be more timely.

Following the creation of the seven new states in Nigeria by the then military government, it was decided that the strategy be applied in the new states as part of the governments programmes to ease the acute low income housing shortage. The programme popularly known as the 'Nigerian States Urban Development Programme (NSUDP)', had two primary objectives, as stated in the project inception report.

1). To assist the States in their implementation of the National Housing Programme (NHP), That was defined by the then Federal Military Government. The first phase of the programme was to design a national mechanism for the financial and technical implementation of the National Housing Programme. It was to be applied initially to two States (Bauchi and Imo), but should be able to assist all the other states of the Federation in meeting their own specific needs (Dar Al-Handasah Consultants 1979).

This mechanism was aimed at responding to the following policy objectives.

- a).Financial replicability
- b).Substantial increase in the housing supply for low-income groups, who are expressing the greatest need.
- c).Definition of affordable standards of construction of housing and infrastructure
- d).Full recovery of investment cost to ensure replicability
- e).Control of the effects of urban sector investment on national and state economies.

2). It was also the primary objective of the first phase of this programme to develop and improve understanding of the components of this mechanism in order to permit identification and financing of similar projects in other states.

By 1978, the World Bank loan was approved for the pilot projects in Bauchi and Imo states, and the implementation of the strategy had commenced by the following year. Other states were also encouraged to adopt the strategy. By 1988, when the Bauchi project (the oldest pilot project) was completed, many other states were at different stages of adoption or implementation of similar projects as shown in the table below.

Table 3-1: Adoption of World Bank Assisted Shelter projects in Nigerian states

STATE	TYPE OF PROJECT	LEVEL OF ADOPTION BY MARCH 1992
Anambra	Urban Development	Indicated interest
Bauchi	Sites and Services and Upgrading	First phase completed. 2099 plots provided
Bendel	Urban Development	Discussion stage
Gongola	Infrastructure development	Loan approved and designs being prepared
Cross River	Infrastructure Development	Discussion Stage
Imo	Urban Development	First phase completed 7880 plots provided
Benue	Infrastructure Development	Project began 1988
Kaduna	Urban Development	Feasibility studies completed
Kano	Urban Development	Project had begun
Kwara	Urban Development	preliminary stage
Lagos	Urban & Infrastructure Development	preliminary stage
Niger	Urban Development	preliminary stage
Ogun	Urban Development	preliminary stage
Ondo	Infrastructure Development	preliminary stage
Oyo	Urban Development	Appraisal of feasibility Studies completed
Plateau	Urban Development	Feasibility report completed
Rivers	Urban & Infrastructure Development	Feasibility Studies completed
Sokoto	Urban & Infrastructure Development	preliminary stage

Source: Field Survey, March 1992

The remaining states have also indicated an interest in adopting the strategy. These projects were called the Nigerian States Urban Development Projects (NSUDP) because they were being implemented in collaboration with the state governments.

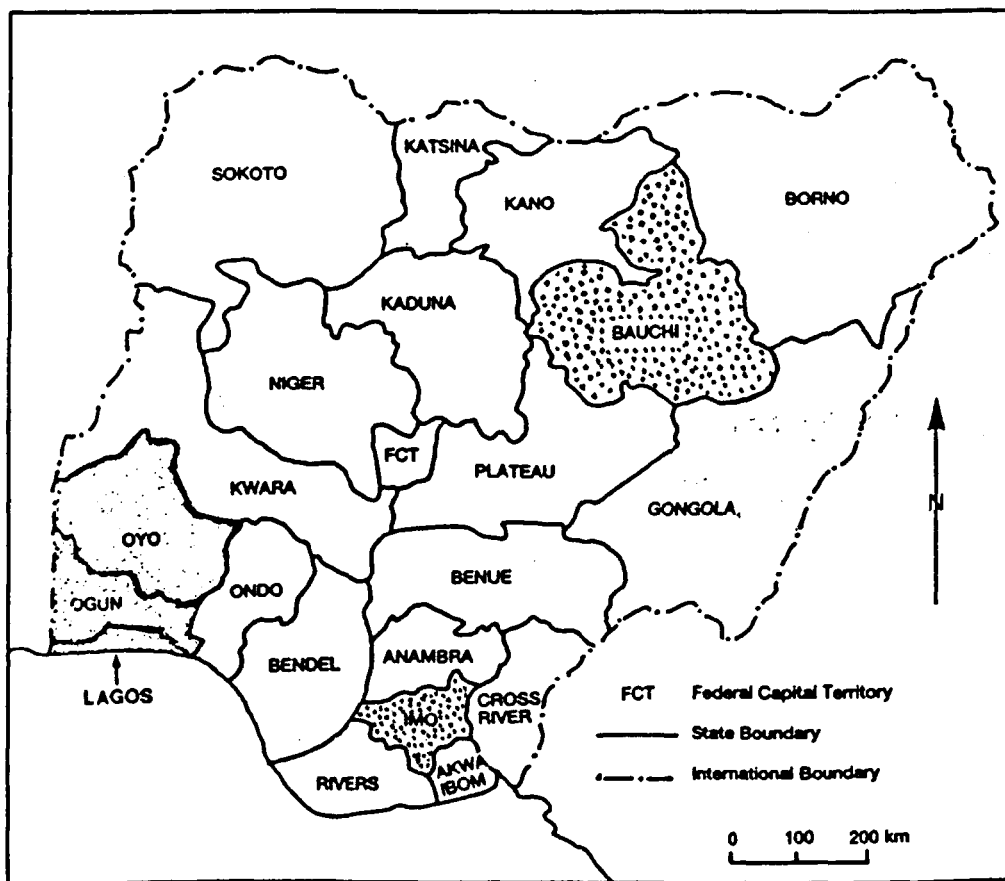


Figure 3.1 : Map of Nigeria showing the pilot projects States, Bauchi and Imo shaded

In the most recent government policy document on housing (the National Housing Policy 1991), the Sites and Services Strategy have further been highlighted as one of the means of tackling the low income housing problem. So with this level of commitment to the Strategy, the requirement for new ideas and methods of making it more effective and efficient can not be overemphasised. This study is aimed at making a vital contribution towards providing such ideas through studying the existing problems and their causes.

The Makama project that is one of the pilot projects so far implemented in Nigeria, has been chosen for the purpose of this exercise.

3.1.1 Choice of the Makama project as a Case Study

The choice of Makama as the case study has been motivated by a number of factors. The first and foremost motivation is the existence of the study problem in this project. Secondly, the project is the oldest and the most mature of all the pilot projects. Thirdly, no similar empirical studies known to the researcher have so far been undertaken on the project. Fourthly, the researcher is particularly familiar with the project town and the culture and traditions of the beneficiaries. This reduces the limitations of the field survey, both in terms of cost, accessibility to data and understanding of the reasoning behind the responses given. Also by understanding traditional and cultural practices, certain types of data can be observed and interpreted accurately.

Makama, which consists of three wards, is one of the largest areas of Bauchi town. Bauchi town is located in the north eastern region of Nigeria and is the commercial and political capital of Bauchi state. Being an urban centre, it has a similar population explosion and the resultant housing shortage as most urban centres. The population of Bauchi town in 1978 (when the project was planned) was taken as 91,673 (Dar Al-Handasah 1978). Assuming an average of about 5% rate of growth, it was estimated that the population will grow to about 102,034 by 1980, and 159,961 by 1990. It is important to point out that the population estimates were crude, because they were based on many assumptions. The indigenous population of the town was predominantly Muslim with large, and usually polygamous, households.

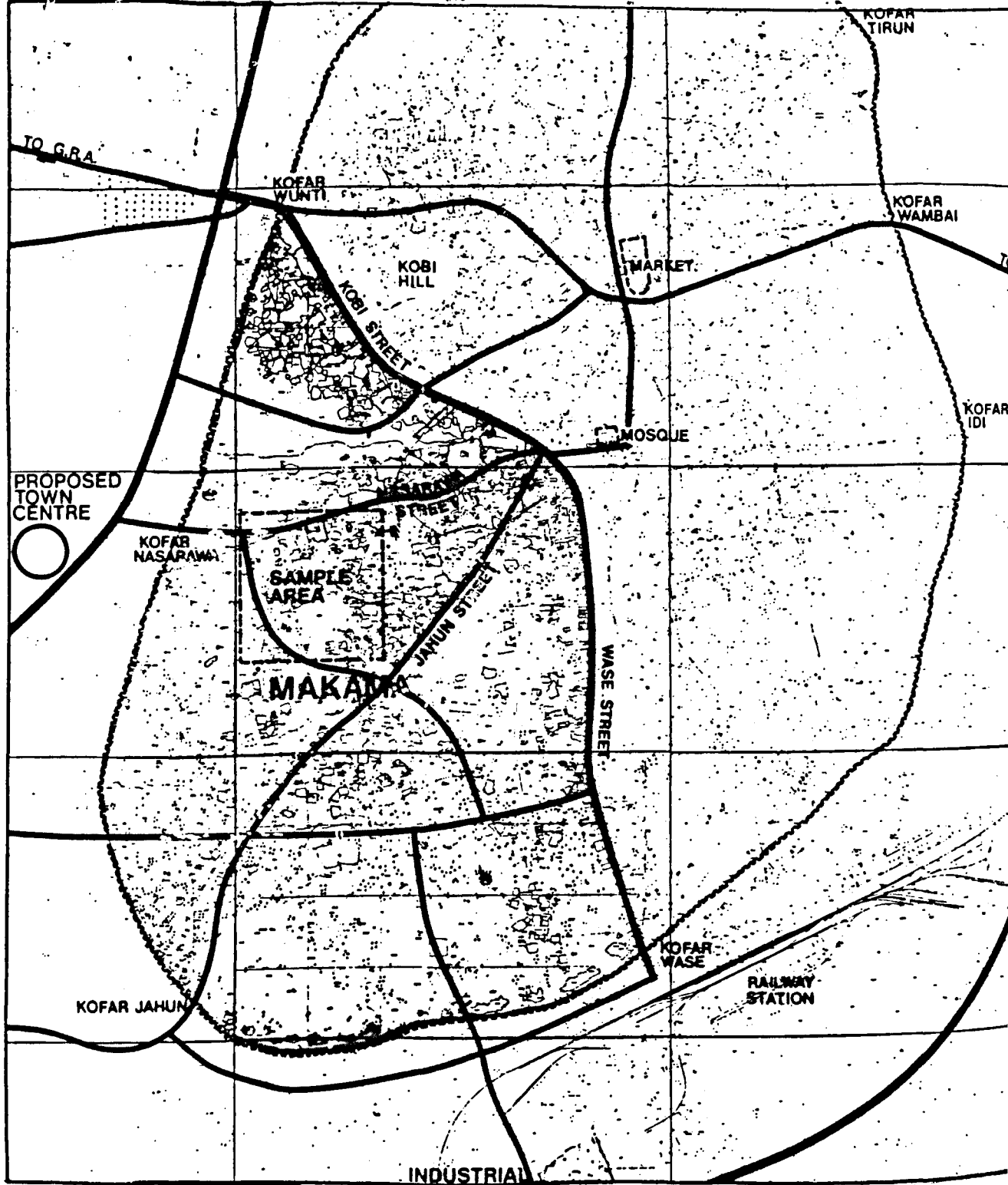
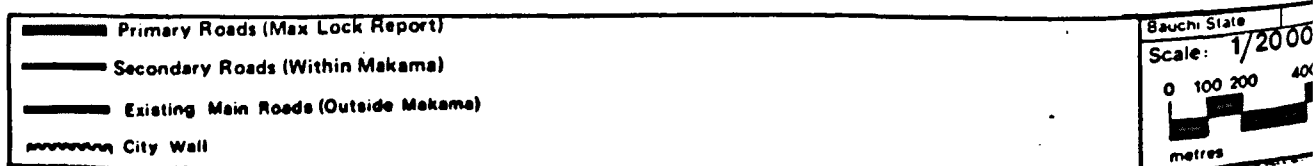


Figure 3.2 : Bauchi town showing the Location of Makama Project Area

Source: Final Recommendations, makama pilot project, Dar Al Handasah Consultants, Shairs and Partners

Scale : 1/20 000 (m)



The Makama area was selected for the location of the project because it was believed to be most representative of the characteristics of the general population. Furthermore, it also had both large tracts of undeveloped land and an un-serviced residential community needed to implement the Project. See figure 3.2 on the facing page showing the location of Makama.

3.2 The Makama project

The Makama Project was planned and implemented between 1978 and 1987. It is a combined project involving servicing new sites and upgrading an existing settlement in the Makama area of Bauchi.

3.2.1 Objectives of the project

While the aim of the project was similar to those stated by the World Bank in all its projects, the specific objectives of the Makama project were stated as follows.

- a) The provision of shelter, employment and urban services to the low income population at a cost they can afford without any need for public subsidies.
- b) To improve the living standards, productivity and welfare of the low income group in Bauchi through upgrading of several of the lowest income settlements and the developments of sites and services. The specific goals of the project were stated as follows.

- to increase the supply of low income housing by allocating 3,950 serviced plots to low income selected beneficiaries and providing them with loan for construction,
- to demonstrate low-cost methods of providing urban housing,
- to recover investment costs on housing and infrastructure, and
- to permit replicability,
- to generate employment opportunities and improve the income of the project beneficiaries through provision of 74 serviced industrial plots,
- to extend essential services (water, electricity, good access roads, storm drains and refuse collection services) to an old settlement in the Makama area benefiting 27,000 people.

3.2.2 Makama Project as planned

After the completion of the feasibility studies and the approval of a loan by the Bank, a firm of consultants was appointed to prepare detailed plans and designs for the Makama project. The following are some of the very important aspects of the project's planning discussed under: design principles, financing and administrative responsibilities and organisation.

3.2.2.1 Design principles of the project.

The major design principles of the project are, affordability, cost recovery and replicability.

Affordability principle is to ensure that target beneficiaries are willing and able to pay for the cost of the housing services provided by the project.

To achieve affordability, identification of the appropriate target group and the design of appropriate standards of shelter and services, whose target cost, would match the group's ability was particularly crucial.

The primary target group for the Sites and Services Strategy has been defined with reference to the low income group generally. Using the data from the income and expenditure survey, in the Bauchi project this group has been identified as the lower 50% of the population. Even though the group not being served by any government housing programme at that time, extended to 70%, it was thought that the 50-70% group were capable of providing for themselves without any assistance.

To define the lower income limit of the target group, project planners used income levels and expenditure patterns to establish a subsistence level.

All the families who fell below the defined subsistence level were excluded from the project, because for them the main concern was their food.

The actual target group thus identified, ranged between the 13th and 54th percentile (Dar Al-Handasah 1979).

It was thought that the affordability within this wide range would vary, therefore the group was further broken down to three subgroups comprising 12-26, 27-40 and 41-54 percentiles.

The income of the poorest family in each of the subgroups was used as a guide

to the amount that can be afforded for shelter related expenditure.

The shelter related expenditure used in the analysis included:

- plot cost (capital sums or monthly mortgage),
- erection of new building on the plot,
- maintenance of existing buildings,
- recurrent services charges relating to consumption of water and electricity,
- monthly/ annual contributions/ taxes relating to services, e.g. drains and roads.

It was assumed that target group would devote 20-25% of their income on shelter related expenditure. This assumption, though contrary to reality, was used in calculating the affordability of the target group. The reality is that most people in Nigeria have been found unwilling to spend more than 10% of their income on housing.

The cost recovery was also to depend on the assumptions regarding the validity of affordability. The costs to be recovered are the cost of land and development (services and on-site infrastructure), and mortgage loans to be issued to individuals.

The subsidy element in the design of the project was kept as low as possible. Though subsidy was an important element in affordability, a high level would jeopardise cost recovery and hence replicability of the project. So a delicate balance would need careful planning and trade off. The obvious element of subsidy, as planned in the project, was limited to, the difference between the market value of the land and the value at which the project sold the land to target beneficiaries. Another element was the cost of off- site infrastructure which was to be provided as part of the routine urban development responsibility of the government to the public.

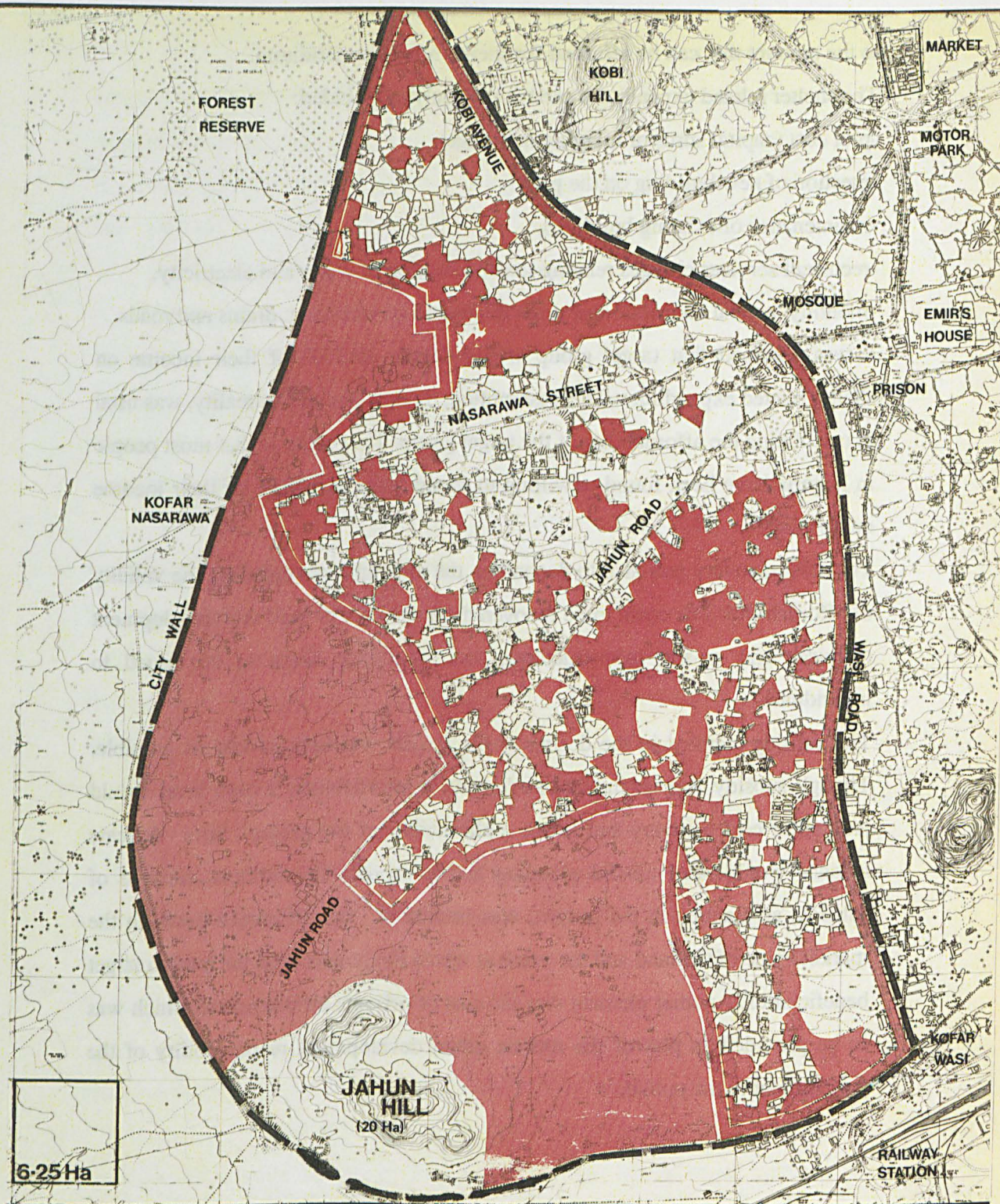
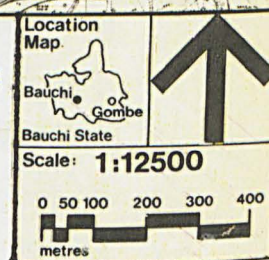


Figure 3.3 : Makama Project Area showing both Sites and Services and Upgrading Areas

Source: Final Project recommendations, Dar Al Handasah Consultants, Shair and Partners.



3.2.2.2 Components of the Makama project.

With the stated objectives and principles in mind, the projects were designed to include eight major components which were: sites and services, settlement upgrading; off-site infrastructure; home construction and improvement loans; social services; industrial estates; and technical assistance to both local authorities and individuals.

i) **Sites and services:** The sites and services component was intended to provide 3,950 serviced plots, on 120 hectares of freshly acquired of land and 74 hectares of in-fill land within the existing settlement in the project area. The services to be provided included roads, water supply, storm water drainage, electricity, sanitary facilities, solid waste disposal system and landscaping.

To achieve affordability by the three different subgroups of the target groups, different options of standards of services, plot sizes and their cost were estimated.

It was assumed that the poorest member of each of the subgroups would afford the cost listed below.

Poorest group	798 Naira
Middle group	1219 Naira
Upper group	1625 Naira

Hence estimates of three different cost options, in relation to the assumed affordability of these sub-groups, were estimated, as shown in the following table.

Table 3.2: Cost assumed to be affordable to target group

cost element	poorest group 100m2	middle group 100m2	upper group 200m2
1. Land	20	20	40
2. Standpipe	71	100	100
3. Pit latrine	50	50	50
4. Soak-away	75	75	75
5. Storm-water drainage	-	-	-
6. Roads minimum	150	150	330
7. Shelter (5.5 m2)	389.5(5.5m2)	811(11.5m2)	1005 (14.3m2)
8. Electricity	-	-	-
9. Site peg-out	12.5	12.5	25
Total cost in Naira	798	1219	1625

Source: Dar Al-Handasah - Makama Project Working paper 3, 1979

For both electricity and water supply, while provision is made on site, individual connections were not to be undertaken by the authorities, but by plot allottees if they wished and could afford.

Smaller less serviced plots cost less, while bigger plots with direct access to road cost more.

Following the above estimates and assumptions, the final categories of plot sizes and cost were proposed. The four different categories and their cost are presented in the table below. The amount of mortgage loan as well as the monthly repayments worked out for each category were also shown by the table (3-3) below.

Note that the sizes of plot finally decided upon are much bigger than what was estimated. This was because the target group had shown a great need for bigger plots.

Table 3-3: Plot sizes in The Makama Sites and Services Project

Plot Type	Size (m2)	Proportion (%)	plot costs (Naira)	Mortgage loan	monthly repayment
AS (Small Subsidised)	216	25	978	3,200	30.0
A (Small Normal)	200	35	1,114	3,200	35.0
B (Medium plots)	270	20	1,414	4,500	60.0
C (Large Plots)	378	20	2,232	6,000	75.0

Source: Field Work March 1992

The C-type plots were meant for a medium group who might be interested to participate in the project. This was meant to enable the principle of cross subsidisation to be applied, where the higher payment for the larger plots could be used to subsidise for the smaller (As) plots for the poorest group.

The Federal Mortgage Bank of Nigeria was reported to have said the pricing policy of the plots was based on the principle that will ensure equity, cross-subsidy, high rate of cost recovery and low level of subsidy.

The FMBN said the following formula was used to arrive at the pricing.

Total area of As plots priced at 50% of level price per square meter.

Total area of A plots priced at level price per square meter;

Total area of B plots priced at level price per square meter, plus 1/3rd of 50% subsidy;

Total area of C plots priced at level price per square meter, plus 2/3rd of 50% subsidy.

Based on these plot sizes a variety of layouts were designed on the basis of residential modules of about 4 hectares in size and were to accommodate between 50 and 150 plots. A total of 2,100 plots was expected be made available for allocating to selected beneficiaries among the target group in the freshly serviced land. A further 1,850 plots were also expected to be made available from in-fill land within the Makama area making a total of 3,099 plots.

Income was the most important criteria in the selection of plot allottees. In addition to income, other criteria used included length of residence in the town (a minimum of five years) and Family size (larger families to be given higher priority). Application forms requiring this information among other relevant ones was designed in English and later translated to the local language (Hausa). It was envisaged that most beneficiaries would come from the group in the area who were currently renting or sharing or displaced by the upgrading exercise. However, there was no restriction on those from other parts of the town from applying for plots in the project.

The target beneficiaries who were to qualify by selection income criteria had to be within 104 - 282 Naira income bracket.

The successful applicants were expected to operate a contract mortgage account with the FMBN for at least 10 months before they qualified for the project loan. The loan granted to the plot allottees, was at an interest rate of 6% payable over a period of 20 years. The amount of loan and the monthly payment arrangement depended on the type of plot allocated as shown in the table 3.3 above.

ii) Residential upgrading component: It is important to note that the term 'Residential' is used in the Makama Project rather than the usual 'squatter' settlement used in most projects. This is because the Makama area is not a squatter settlement, it is a traditional settlement that is badly adapted to modern planning requirements (Dar Al Handasah 1978).

The upgrading component of the project was to provide infrastructure and services to a traditional settlement inhabited by 27,000 people living in 1,900 compounds. Services to be provided were water supply, electricity, good access roads, storm drainage gutters, refuse collection services and landscaping.

iii) Off-site infrastructure: This was to involve the improvement of town roads; construction of main out-fall drains; high tension electricity networks and the connection of the existing bore-holes to the main city networks serving the walled area of the city. The cost of this component will be borne by the authorities as part of their routine urban upgrading.

iv) Home construction and improvement loan: Loans were to be made available to all plot allottees for the development of their individual plots. The loan was to cover building material cost of the proposed basic unit while the cost of labour is assumed free through the use of family labour. The calculation of the amount of loan was based on the estimate of materials cost for the construction of two bedrooms basic unit (50m²). It was estimated to cost about 3,500 Nigerian Naira (\$4,390 as at 1978). This was only the minimum acceptable size and material standards, but those who wanted bigger units could build if they could afford them. It is important to note that the cost estimate did not include the price of the serviced land. The assumption was that families would have savings or other sources of money to pay for their land.

v) Social Services: Under this component, 5 health clinics, 5 primary schools and recreational facilities were to be provided in the sites and services site, to serve both new area and the old settlement in Nasarawa. Large borrow pits in the area were also to be filled levelled to eliminate one of major breeding ground of mosquitoes thereby reducing the spread of malaria.

vi) Industrial estate: The industrial component was incorporated to generate employment for the residents. About 74 fully serviced industrial plots were to be made available to interested investors who could acquire and build light scale industries.

This component of the project was aimed at generating employment for the new community in sites and services as well as the old settlement community.

vii) Technical Assistance: The Urban Development Board was to be provided with technical assistance in form of man power, for the implementation of the projects. Also the plot allottees were to be given some technical training on building process via demonstrations' units and extension services.

3.2.2.3 Financing the project

By principle, the project cost will be paid for by the beneficiaries, but the initial investment estimated at \$36.6 million (56 million Naira at 1978 rate) needed was to be jointly paid for by the World Bank loan, the Federal government of Nigeria and the Bauchi state government in the proportions shown by table 3-4 below

Table 3-4: Financing of the Makama Projects

Contributing Body	Amount contributed (million dollars)	Percentage (%)
World Bank	17.9	49
Bauchi State Government	11.4	31
Fed. Govt. of Nigeria	7.3	20
Total	36.6	100

Source: Field Work, March 1992

Except for the off-site Infrastructure, primary roads and street lighting, all the other cost (both Capital and Current) was to be recovered from the beneficiaries. Three methods of payment to be used were; land cost which includes the cost of services; loan amortisation and the pay as you use charges for on plot electricity and water connections.

The payment for land was to be immediate as a down payment and depended on the size of plot allocated. The remaining cost was to be paid at a 6% interest rate over 20 years. The amount to be paid varied also depending on the size of plot allocated and the amount of loan taken as shown in table 3-3 above.

3.2.2.4 Administrative organisation

The following administrative arrangements were made for the effective project planning and implementation.

- i). A project unit was to be set up, and charged with responsibility for the implementation of the project under the direct supervision of the Bauchi State

Urban Development Board and the Federal Mortgage Bank of Nigeria with technical assistance from the World Bank.

ii).The Bauchi state government through its Development Board was to be responsible for co-ordination of projects, acquisition of land, payments of compensations, survey of land, preparations of designs (Direct or via an appointed consultants), staffing a project implementation unit, supervision of project implementation, mobilisation of community action in both sites and services and upgrading projects and post implementation maintenance of the projects.

iii).The Federal Ministry of Works and Housing and the Federal Mortgage Bank were to jointly supervise the project preparation studies and monitor the performance so that lessons learnt could be transferred to future similar project

iv).The plot development was entirely an individual matter. However, it was suggested that local community groups be formed through whom beneficiaries' complains or request could be channelled. Such groups would also be helpful in mutual help labour as well as management and maintenance of housing area and services. They may also be useful in cost recovery.

3.3 Project implementation

In 1987 the Makama project was declared officially completed when all plots achievable were made available for allocating and the World Bank had disbursed all its loan.

The Project as implemented however, fell far short of the planned target dates and quantity. According to the original schedule for instance, implementation should have been completed by 1983 when all preliminary and civil works should have been completed and plots demarcated and allocated to selected beneficiaries and shelter loans disbursed to them for home construction. Two years from then by 1985, the project was expected to be fully matured with all structures and shelter in place and households occupying at least basic units in the beginning. In reality, the project implementation had dragged for nearly a decade and was still not fully completed at the time of this study. The delay in the implementation has also resulted in cost overruns due to inflation and

devaluation of the Nigerian currency. The appraisal study conducted by Onibokun in 1989, for instance revealed that, the project actual cost came to 126 million Nairas (\$28 million) instead of the 23.76 million estimated. This means that the value of the World Bank loan taken has also increased from 11.56 million to 61.9 million Nairas, meaning that the Nigerian government as at 1988 will pay more than five folds of what they had borrowed from the Bank. The figure has even gone up now, because the value of Naira has further depreciated.

The delays in project implementation have been attributed to a number of factors including the following:

i) Delay in setting up a project implementation unit due to the shortage of technical personnel, inertia and long bureaucratic procedures. When the unit was finally set up, many of the staff were inexperienced and could not effectively handle matters in project execution and monitoring (Onibokun 1989).

The unit did not have an autonomous power to deal with many issues. Matters like plot allocations had to be referred to the Commissioner of lands in the state ministry and join the bureaucratic delays inherent in the system.

ii) Delays in land acquisition procedures: This, which was envisaged to be quick and easy due to the land use decree turned out to be a very difficult, costly and time consuming process. The project unit, instead of preparing a cadastral map for easy identification of the various parcels of land, used a crude method of physically measuring the land area each owner said he owned, have his name written down and pay him accordingly. There were 1,500 land owners involved in this process.

iii) Delays in execution of civil works: The award of contracts for the civil works was delayed until 1981. This was because the first set of detail designs and engineering drawings prepared by the appointed consultants were found to be incorrect and had to be condemned. The project had to be re-commissioned for new designs causing further details and an additional cost. When the contracts were finally awarded, as a result of lack of consistent release of funds and lack of co-operation from the other agencies, the contractors did not work as fast as expected.

The plot allocation exercise and the initiation of construction which were dependent on the progress of the civil works were also delayed until the last quota of 1983.

iv) Delays in plot development: Monitoring reports and preliminary evaluation of this project have indicated the slow process of plot development by the plot allottees. Many plot allottees were either very slow or not developing their plots for a long time after allocations were made to them; some started building and later abandoned. This is the major focus of this study and therefore discussed in greater details in the later part of the chapter.

3.3.1. Achievement of project's objectives

Of interest to any project evaluation is whether the original design objectives of the particular project have been achieved after implementation or not. In the Makama project, the objectives are only partially achieved. The objectives of the project were translated into specific goals and targets. The examination of the each of these targets below, shows clearly that a wide gap exists between the stated goals and the achieved in many aspects of the project.

i). Substantial increase in the supply of low income housing in Bauchi through providing 3,950 serviced plots for low income housing

First of all, only 2,100 serviced plots were achieved, leaving a short fall of 1,850 plots.

There is no doubt that the project has led to an increase in the supply of housing in Bauchi. However it failed to substantially increase the supply to the low income group. Survey (analysed in chapter 7) has shown that only about 20% of the houses built in the project area belonged to intended low-income earners, while about 80% belonging to a middle and high income earners.

ii). To demonstrate low-cost methods of providing urban housing: This was not achieved at all. The methods of construction adopted throughout the project was not low-cost. The majority of the house built were found to cost more 3 times the cost of an average low cost house in Nigeria (Onibokun 1989).

It is important to point out here that even the demonstration unit built by the project unit that was supposed to set an example was far too costly. The

completed project demonstration unit was sold to a very rich individual at the cost of 45,000 Naira. It would be argued that the high costs of most of the houses in the project were as a result of ambitious designs and construction standards undertaken by the builders. Although the resulting standards are desirable, the implication, as it was found out during the survey was that the builders were not whom they were intended to be.

iii). To recover investment cost on housing and infrastructure,

The prospect the recovery of the investment cost of the Makama project anticipated, was not too promising according to the Manager of the Federal Mortgage Bank. Although the majority of beneficiaries have been found not to default payment, the assumed recoverable cost of project appeared not realisable for a number of reasons. First, every component of the project cost more than was estimated. The project was expected to have cost 28 million Nairas but the actual cost was 36.6 million. This meant a widening of gap between the cost and amount recoverable. The following table shows the estimated amount recoverable.

Table 3.5 Estimate of amount recoverable from Makama project.

Source of recovery	Amount- (Naira)	Comments
Development charges	104,000	This amount turned out to be double the actual amount collected on the approved plan
Mortgage loans repayments	7.53 million	This amount was based on the assumption that all mortgage loan would eventually be paid off with full interest by borrowers
Sales of housing plots	1.07 million	Based on the assumption that all plots would be sold
Sales of industrial plots	74,000	Assuming plots be sold at the rate of 1,000
User charges-water	1.5 million	At a rate of 6 Naira per month per household over 15 yrs.
User charges - electricity	1.5 million	assuming rate of 6 Naira/month/household over 15yrs.
Total estimate	11.78 million	

Source: Field Survey March 1992

As can be seen, the total amount recoverable is 11,785,3000.00 Naira. Even if this amount was to be recovered fully, a wide gap still exists between the actual project cost and the recoverable amount. This represents a heavy element of hidden subsidy in the project. Furthermore, as a result of Naira devaluation, the actual cost of the project in Naira, as at 1988, was 126 million. Also the actual amount in Naira that the Nigerian government has to repay to the World Bank is 61.850 million, as at 1988 (Onibokun 1988), and not the 11,558.4 million estimated. This amount has since increased because of the downwards trend of the Naira. The amount stood at nearly 140 million in 1992. Note that this amount excludes any interest on the loan. As this additional cost can not be transferred to the beneficiaries, it represents a huge element of subsidy that has to be born by the government. This clearly means that the original investment can not be recovered.

iv). Following the above discussion on the failure of cost recovery, the conclusion is that the prospect of replicating the project in the near future is almost impossible. Many officials involved with the project, including the FMBN Manager, have reported that replicability is not possible.

v). To generate employment through the industrial layout provided to investors. This aspect of the project was also not achieved. Contrary to the assumptions of the project planners, no investors showed any interest in the industrial plots provided. Therefore the plots have been converted to residential plots and sold to high income earners.

The only form of employment generated was of a temporary nature during the construction work. However, most household heads were found to be employed in another part of the town and did seem to be doing very well. This is because the area is not remote and is easily accessible from the other parts of the town.

vi). To improve the quality of housing in the existing settlement by extending essential services (water, electricity, good access roads, storm drains and refuse collection services) to them, thus benefiting 27,000 people.

This appeared to be the most successful component of the Makama project, both in meeting its set target, as well as reaching the intended groups effectively. All the five clinics, five primary schools, proposed roads, as well as water supply

and electricity, promised, were delivered to the community. This has no doubt improved the living standards of the low incomeed directly. Although the majority of households were still using wells as a major source of water supply, complete reliance on them was less than it use to be.

The only problem with this component of the project, appeared to be the provision of storm drains. The storm drains were still uncompleted as at the time of the survey. Some parts of the project area were being flooded occasionally.

Improvement in individual houses appeared to be concentrated on the frontages (zaures) mostly. Generally, the area looked improved in all aspects. The following table summarises the general performance of the Makama project as at the time of this survey in 1992.

The above discussion clearly shows that the objectives of the project are far from being fully achieved.

While many of the objectives were only partially achieved, others were not achieved at all. The following table gives a summary of the performance of the project.

Table 3.6 Summary of the Makama project performance.

Project Goals	Planned	Achieved	Comments
1. Substantial Increase of low-income housing, through the provision of serviced plots and building loans . a. Serviced plots b. Building loans	3,950 All plot allottees	2,100 55%	Partially achieved. Target number of plots could not be achieved. Also only about 20% of low income allocated plots were built. and only about half of plot allottees received building loans.
2. Affordable cost of construction	to all	not achieved	The houses built were found not to be low cost.
3. Reaching the low-incomed a). S&S Component b).Upgrading	80% 100	20% 100	Only 20% of the low-incomed benefited by building a houses in S&S project, but 100% of low income benefited through upgrading
4. Recover investment cost	Recover estimated cost fully	cannot recover	Less than 10% of the capital cost would actually be recovered. Huge element of subsidy
5. replicate project	in other location	unlikely	Replication of project is highly unlikely
7. Generate employment by providing 74 industrial plots to entrepreneurs	74 local industries	none	Entrepreneurs showed no interest in plots provided.
8. Improve the quality of existing settlement to benefit 27,000 low	5 clinics 5 school	5 clinics 5 schools 11 b/holes 11 k. volt	Most targets were achieved, though with delays.

Source: Field Survey March 1992

3.3.2 Issues arising

Apart from the delays in implementation of the project, several other changes were made during implementation of the project some of which include: upward increase of income bracket for participation in the project, imposition of the use of higher standard permanent materials and plot revocation exercises from original allottees. These changes had their various consequences, which have already been discussed in the first chapter.

However, of interest to this study is the issue of plot consolidation by the target plot allottees of the project. Although the progressive development model by its nature advocates a gradual and slow development process, in many cases the process turned out to be even slower than expected.

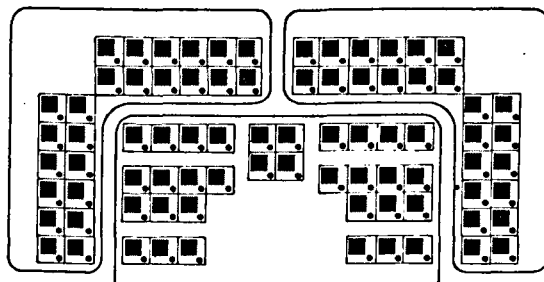
In the Makama project, about seven years after the project commencement, nearly half of the allocated plots were still vacant with no sign of any development and many constructions that had been started looked abandoned (Onibokun, 1988). This means a very low level of consolidation in the project.

Since the Sites and Services Strategy has been incorporated into the National Housing Policy, this slow production process will be a major drawback to the overall housing provision for the low income groups. The aim of this study, as stated earlier, is to investigate why the level of consolidation remains lower than expected. As a starting point for this investigation, an attempt has been made in the next section of this chapter to find out the extent of the low level of consolidation in the project at the time of the study.

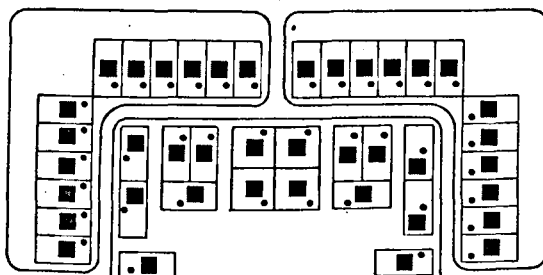
3.4 The low level of consolidation in Makama Project

This section attempts to establish the extent of the low level of consolidation in the project at the time of the study. Here, the major determinants of the consolidation level, such as: the speed and rate of completion of houses, lack of consolidation by certain groups, and the turn over rates are discussed.

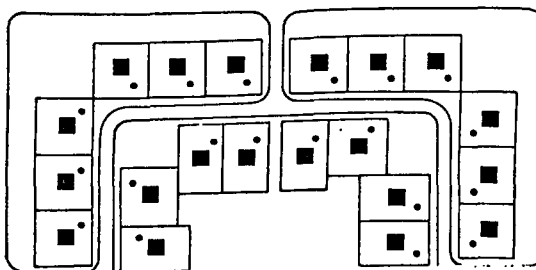
SMALL PLOTS
80x100m²
developed
area 8000m²



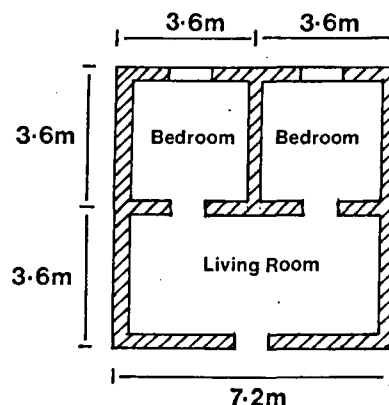
MEDIUM PLOTS
40x200m²
developed
area 8000m²



LARGE PLOTS
20x400m²
developed
area 8000m²



MINIMUM HOUSE: 50m²



SPECIFICATION

Concrete foundation and blockwork up to ground level

Concrete floor slab

3m-high mud-block walls

Cement render externally

Zinc roofing plus azare timbers

1 zinc and timber door

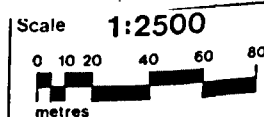
4 zinc and timber windows

NET COSTS: ₦3 500

fig 3.4 : Specified size of basic unit and building materials

Note that though a 3m mud wall was put down on paper as one of the material specifications, this was replaced with concrete blocks or burnt bricks by the authorities as the soon as project took off. The use of mud for any part of construction was banned. The few people who attempted to use it were ordered to demolish their buildings.

- 50m² minimum house
- 4m² service core



Consolidation can be interpreted in many different ways by different people at different times depending on the focus of a study and the issues being addressed. For instance, for a study focused on assessing consolidation in a squatter settlement, consolidation would be interpreted as the gradual process by which a squatter in an illegal settlement improves his dwelling from a mere makeshift house to a permanent dwelling following legalisation and provision of basic services by the authorities. On the other hand, consolidation on a freshly acquired plot of land as in the sites and services projects will mean a process by which the owner gradually builds his house and occupies it. The latter interpretation is what this study is mostly interested in.

The process of new house building will usually involve: the purchase of land, its preparation and development, preparation of the house design, purchase of materials and labour and the actual building of the structure. However in the sites and services projects, the project authorities undertook the initial stages of acquiring, preparing and developing the land and then allocating it to the households. A design for the initial basic unit house was also made available for those who wanted to adopt it. In effect, the plot allottees undertook only the payment for the plot, the actual construction process and moving into their houses. The completion of these stages marks the end of the process of consolidation for this type of housing exercise. However, for the purpose of analysis in this study it will be necessary to define the end point where consolidation is completed. In this study, consolidation is defined as the process by which households, who were allocated plots in the sites and services projects gradually build at least minimum habitable housing units over a period of time and move in. Though house building continues beyond this level, as and when the household can afford it, additions will mainly be improvements and extensions to the dwellings. The minimum habitable unit, estimated by the project planners, was a unit of two bedrooms and a parlour, and a service core (kitchen and toilet) built with a combination of traditional (mud) and modern materials (concrete). See figure 3.4

3.4.1 Pace of Consolidation in Makama project

The actual consolidation undertaken by each plot allottee consists of a number of stages, beginning from the setting out the building plan through laying foundations and floor, to raising the walls and roofs and finally finishing the house and moving in. The level of consolidation at any one time will depend on how fast or slow the households are able to undertake these processes through to completion. Hence speed of construction and rate of house completion are very crucial in determining the level of consolidation.

Every beneficiary in the Makama project was expected to complete and move into at least a basic unit or show substantive progress towards this, within two years of plot allocation. This requirement was necessary to achieve one of the projects' objective of increasing estimated additional low income housing stock for the planned period. In order to find out how far this dateline was adhered to, the owners of completed houses were asked how long it took them to complete their units, their responses are in the table below.

Table 3-7 : Duration of construction period.

Duration of construction (in years)	Frequency	
	No	%
1 - 2	61	60.4
3	30	29.7
4 - 5	10	9.9
Total	101	100.0

Source: Field Survey, March 1992

The table reveals that most completed houses were built to a habitable level within a relatively short period. Up to 60.4% were completed within two years or less of plot allocation, and 29.7% took three years while only 9.9% took four to five years.

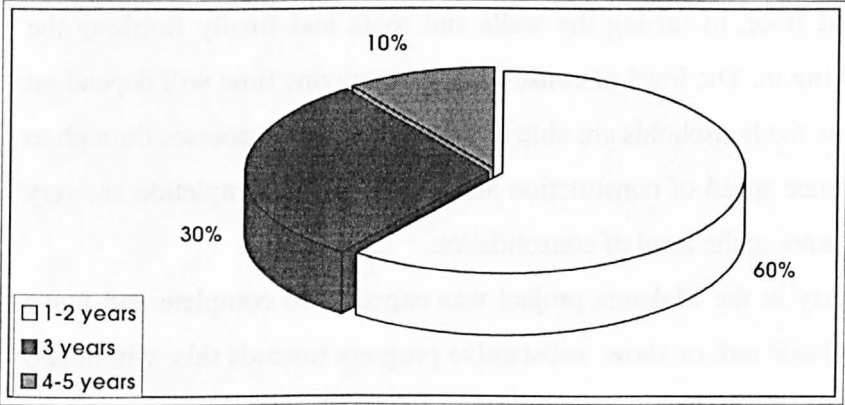


Fig 3.5 Duration of construction period

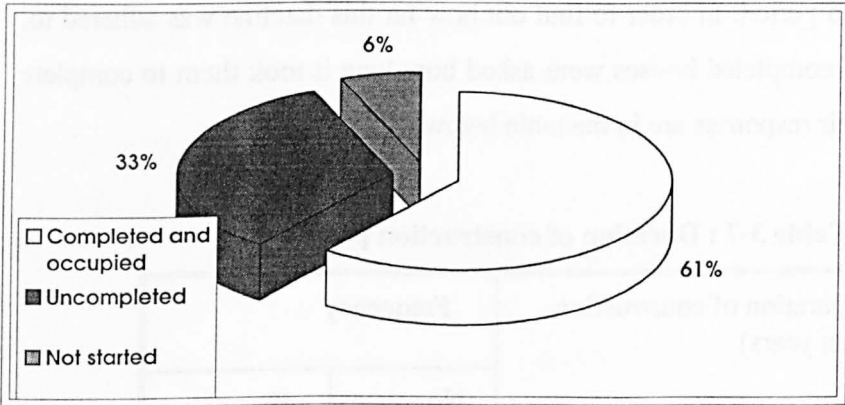


Fig 3.6 The level of consolidation

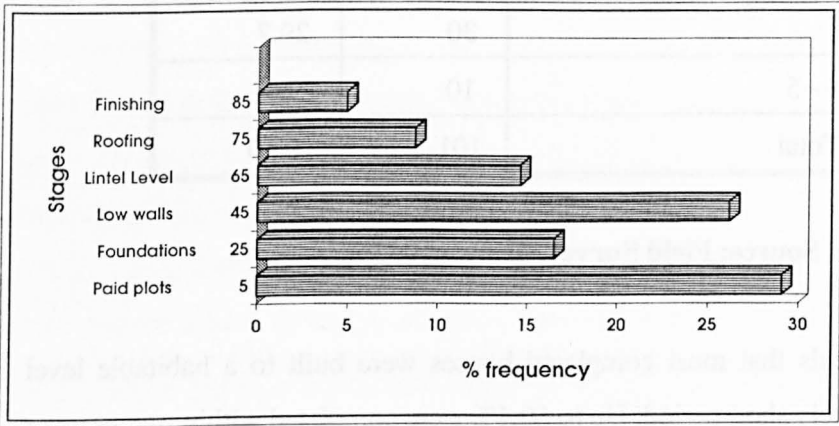


Fig 3.7 Stages of construction reached on individual plots

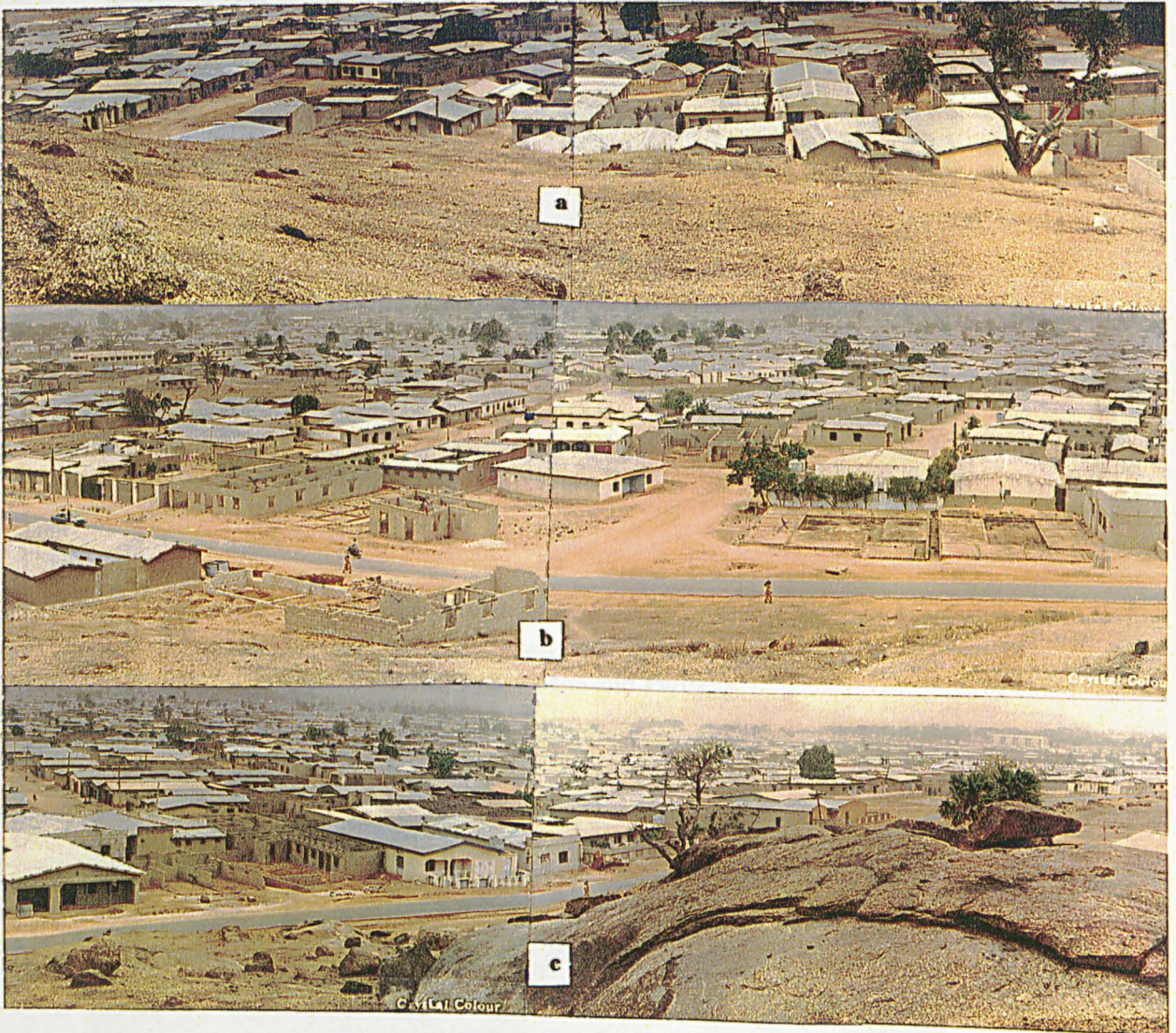
This means that those who consolidated did it speedily, mostly within two years of plot acquisition. Despite this, the total number of units completed in the project remains low. This is because certain plot allottees are either not consolidating or are very slow in doing that. A general survey of the project site reveals that many units that were started are uncompleted and others are abandoned. Some plots are empty with no signs of construction at all, as shown in the following table.

Table 3-8: Level of consolidation

Level of consolidation	Frequency	
	No	%
Completed and occupied	1,272	60.6
Uncompleted	696	33.2
Not started	131	6.2
Total	2,099	100.0

Source: Field Survey March 1992

The table reveals that, as at March 1992, nearly a decade after the project took off, only 60.6% of the plots were fully consolidated. A further 33.2% are at different stages of construction while the remaining 6.2 % are totally empty with no sign of construction. A further analysis was also undertaken to show the stages of construction of the uncompleted houses. This will also be used to indicate how many more houses will be completed within a certain period of time; and from this the future rate and level of consolidation can be estimated. The results of the investigation, as shown by tables 3-9 and 3-10, are not very promising. Despite the majority of houses being at earlier stages of construction, many are abandoned and may not be completed within five years or less. Note that some of the uncompleted houses shown in the following plates show no sign of progress. Many of them looked abandoned, with no sign of construction being continued. (Plates 3.1 - 3.6 are illustrations of abandoned and uncompleted houses.)



Plates 3.1 a,b, & c : Show the Makama Project aerial view at various angles from Jahun hill

The plates Show the project area as it was at the time of survey in March 1992. The pictures were taken from the top of Jahun hill. Notice that the vegetation is very scanty, because most of the original trees in the area were cut down during plot preparation. Also the areas originally demarcated for parks and tree planting were converted to building plots.

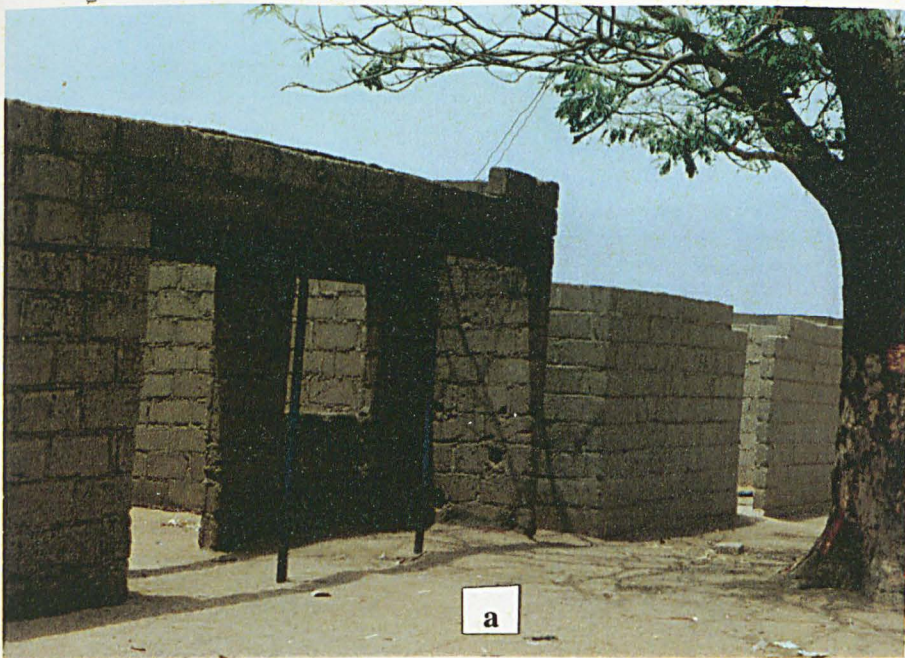
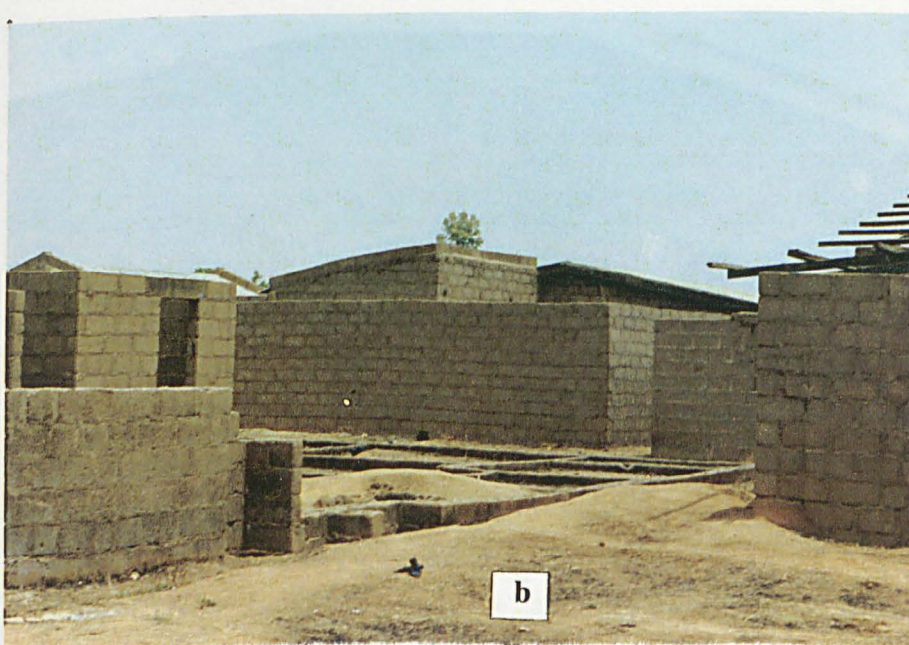


Figure 3.2 : Bauchi town showing the Location of Makama Project Area

Source: Final Recommendations, Makama pilot project, Dar Al
Handasah Consultants, Shairs and Partners

Scale : 1/20 000 (m)





Plates 3.3 a&b : Examples of some of the unfinished houses at the advanced construction stage

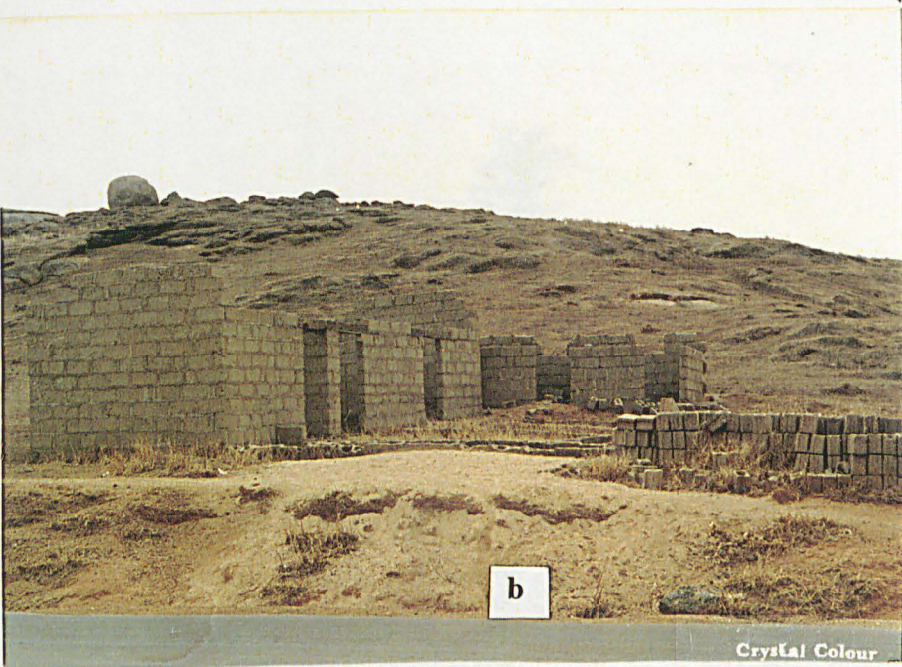
Showing houses at roofing and finishing stages. The house in plate A was bought from an original allottee when the foundations were only partly completed. Building activities have resumed in the house and will be completed three months from the time this picture was taken. The owner, however, has another house and will let this after completion.





Plates 3.4 a&b: Examples of abandoned uncompleted housing units.

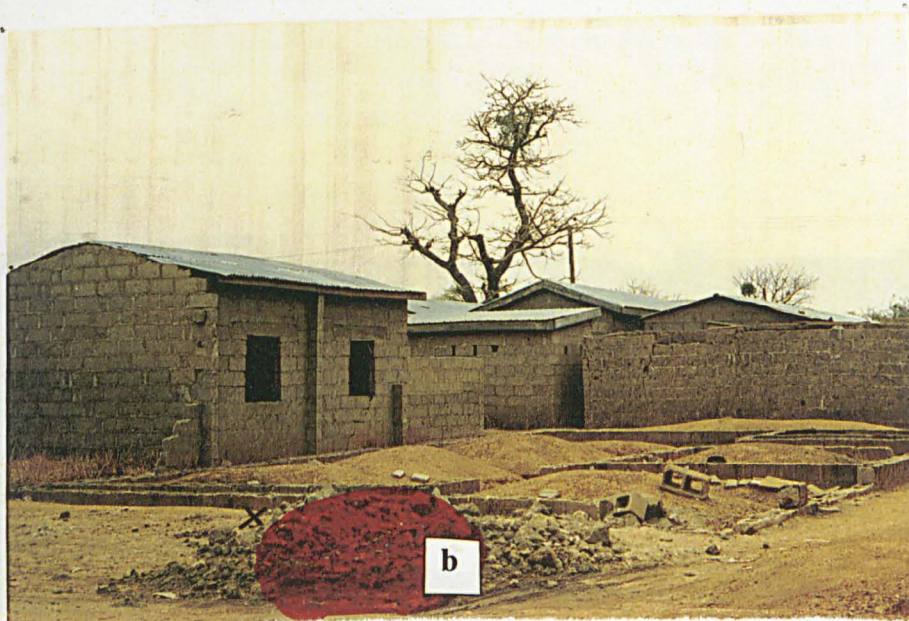
The units in plate A had been abandoned for five years at the time of the survey, and those in B for three years. The owners were interviewed and they said they were renting at the time. They did not think they would be able to complete the houses.





Plates 3.5 a&b : Examples of uncompleted units and undeveloped plots used for dumping solid waste

These are occasionally burnt down, releasing fumes, which smell terrible into the whole surrounding area causing air pollution.





Plates 3.6 a&b : Showing large uncompleted housing units

More examples of large uncompleted houses. Both of houses have cost more than necessary to complete a minimum unit of consolidation.

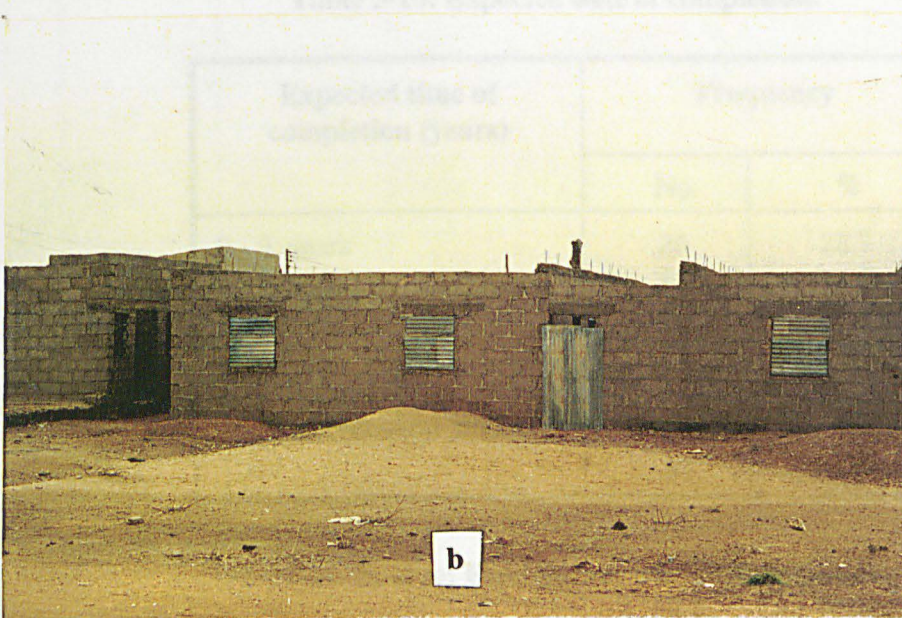


Table 3.9: Stages of consolidation reached.

Stages of construction (percentage completion)	Frequency	%
Paid for plot only (5%)	38	29.1
Foundation & dpc (25%)	17	16.5
Low walling (45%)	27	26.2
Walling to lintel (65%)	15	14.6
Roofing stage (75%)	9	8.7
Finishing (85%)	5	4.9
Total	111	100.0

Source: Field Survey March 1992

The table reveals that nearly half (45.6%) of the plots were either empty or had only foundations, and 40.8% are at different stages of walling. Only 8.7% are at the roofing stage and only 4.9 per cent at the finishing stage. This means that more than half (71.8%) of the uncompleted houses have not gone half way through the process of consolidation. Furthermore, many looked abandoned with overgrown grasses and rubbish tips.

When some of the non-consolidators, were asked to estimate the time they thought they needed to complete their houses and move, the following responses were obtained.

Table 3-10: Expected date of completion.

Expected time of completion (years)	Frequency	
	No	%
2 - 3 years	25	28.7
4 - 5 years	13	14.9
Indefinite	22	25.3
Planning to sell uncompleted unit	23	25.4
Have a revocation notice	4	4.9
Total	87	100.0

Source: Field Survey March 1992

Note that only 28.7% (25) of the respondents said they could finish within 2-3 years. This means that by 1995, the total number of completed houses would have increased by only 25 units. The plots that have not been developed are likely to be revoked and allocated to other people, who are mostly not from the target group as evidence has shown. This implies, that not many houses will be completed in the near future and the total number will remain low.

3.4.2 Rate of production of units

The rate at which the units are being finished can indicate the overall level of production at any one time. The higher the rate, the more the number produced at the end of a certain period. The rate of production in this project is measured by the number of units completed per year using the project records from the previous years. For the three year period between 1992 (when the survey was conducted) and 1995, the responses from the survey were used to estimate what the rate is likely to be, as shown in the table below.

Table 3-11: Level of consolidation by year

Year	No of Plots allocated	No of houses started	No of houses completed	Level of completion	Rate of production(/yr.)
1985	1174	131	18	1.5	18/year
1988	1972	954	438	22.4	146/yr.
1992	2099	1968	1270	60.6	317/yr.
1995	2099	2099	1295(est.)	69.9	8/yr.

Source: Field Survey March 1992

Though the above table shows that the level of house completion has increased

over the years, it is still lower than the expected level as at 1992 (by which time the level should have been 100%). Furthermore, an estimate of the number of houses to be completed in the period between 1992 and 1995, shows that no significant increase will be made on the level by the intended target group. What is even more alarming is the finding that the original plot allottees are being systematically replaced by an unintended group.

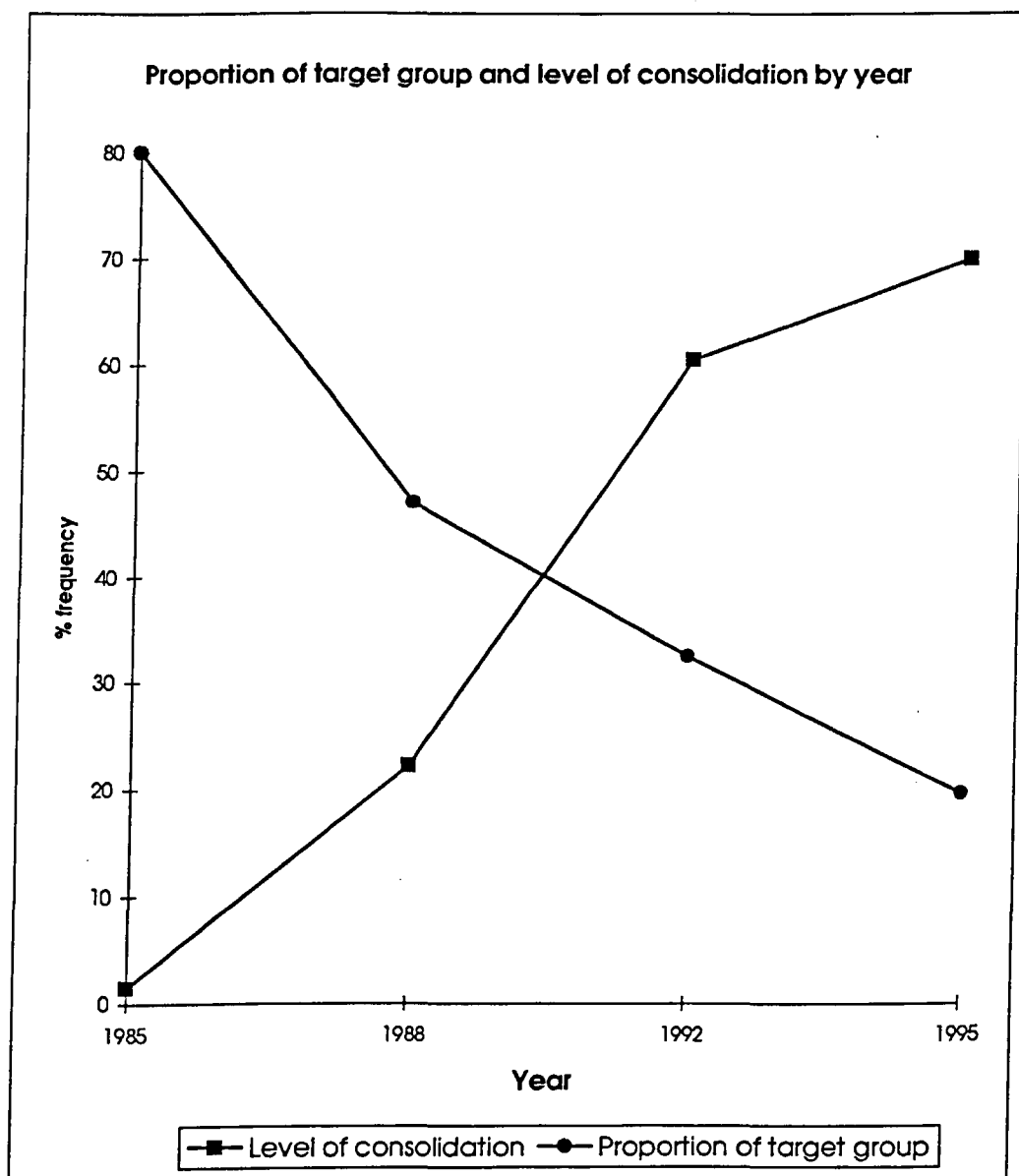


Fig 3.8 Proportion of target group and level of consolidation by year

The project Surveyor reported that as at 1992, 400 plots originally allocated have been revoked and reallocated to others. A scan through the allocation register confirms this. It also revealed that most of the new allocations went to a higher income group because stricter conditions, which the low income could no longer meet were introduced. If the project records are anything to go by, the initial allocation exercise was 80% to 20% in favour of the low income target group (those earning between 200-500 Naira). However, this ratio kept changing over the years. The proportion of the low income group had reduced to only 19.7.8% by 1992. See the table below and the comparative graph Fig.3.8, on the opposite page.

Table 3-12: Proportions of income group

Income levels (in Naira)	1985		1992	
	No	%	No	%
200 - 350	72	75.0	54	19.7
351 - 500	13	13.5	77	28.1
501 - 800	11	11.5	125	45.6
800 & over	0	0.0	18	6.6
Total	96	100.0	274	100.0

Source: Field Survey March 1992

Note that the 1992 survey includes the owners of all categories of plots consolidated and unconsolidated. When these categories are separated, the results become even more disappointing. Out of the 159 completed houses surveyed, less than 20% is from the legitimate income group.

The fact that initial allocation records showed that 80% of the plots was allocated to the low income group, and the result of the analysis of the completed houses shows only 19.7% belong to this group, indicates that the consolidation problems are being experienced mainly by the low income beneficiaries.

It is very important to note here that the income brackets used were not the original figures used by the project authorities. Adjustment in incomes and

changes in the definition of the low income groups, which occurred over the years since the project was started, were taken into account.

3.4.3 The extent of the low level of consolidation

At the time the study was conducted in March 1992, the level of consolidation in the project remained lower than expected. The project was declared completed in 1987, by which time most of the civil works had been completed, all the serviced plots achieved were allocated to the beneficiaries and the World Bank had disbursed all its loan. The following table reveals the date of plot allocation in order to show that all the plots surveyed had been allocated for many years.

Table 3-13: year of plot allocation

Date of plot allocation	Frequency	
	No	%
1983/84	34	29.8
1985/86	39	34.2
1987/88	28	24.5
1989/90	13	11.5
Total	114	100.0

Source: Field Survey March 1993.

As the table has shown, 88.5 per cent of the surveyed plots were allocated before or during 1988 (that is four years before this survey). Only 11.5% were allocated in 1989/90, about two years before the survey, which was also sufficient time for the minimum period of basic unit consolidation (2 years) expected after plot allocation. Therefore it is justifiable to say that a full consolidation of 100% was expected on all plots by the time this survey was conducted.

However, as we have seen earlier, this did not happen. Further evidence also

revealed that the level would not increase significantly in the following three years.

3.4.4 Summary and Conclusions

It is clear from the above discussion that in many aspects of the projects, there were discrepancies between the planned targets and what were actually executed. These include, the time and cost targets and plot consolidation. Of major interest to this study, as stated earlier, is the discrepancy in plot consolidation level.

The gap in level of consolidation was established. Certain plot allottees have not started building, and others not completing the buildings they have started on their plots. This was due to a number of reasons; the investigations of this will be the major preoccupation of the rest of this study. Also evidence has shown that the level will remain low in the near future unless some measures are taken. It was also established that the consolidation problem is more serious among the low income group (original plot allottees) whose proportion in the project, kept reducing with time. It is important to note that even if consolidation in the project increases in the next few years, it is more likely to be by a group other than the original target group, judging by the trend shown above. Unless something is done to reverse this trend, the intended target group will be displaced completely within a short time and the benefits of project will shift entirely to a different group. So the purpose of this study is to find the causes of this problem. To accomplish this task, the first step was to discover what has been said about the causes in the literature, on the basis of which the hypotheses tested by the study were partly formulated.

The next chapter presents this discussion.

Chapter 4 :Causes of the low level of consolidation in Sites and Services project

4.0 Introduction

The previous chapter was a description of the case study which established the extent of the research problem. This chapter, which is mainly on the factors affecting consolidation, and the causes of its low level, is aimed at finding likely answers to the research question. The hypotheses tested in this study were derived partly from the relevant information provided by this review, and partly from the background knowledge and understanding of the case study area and the beneficiaries. The chapter is divided into three sections, with the first discussing the concepts and definition of consolidation in aided self-help housing projects and the interpretation of the low level of consolidation. In the second section, the factors affecting consolidation and the causes of its low level in the site and services projects are discussed. The last section is a summary of the chapter with a conclusion on the factors to be tested.

4.1 Consolidation in the self-help housing projects.

The consolidation process in aided self-help housing can be looked at in two different ways. First, consolidation can be defined as a process by which families in squatter settlements gradually invest and improve their dwellings following legalisation and upgrading of the settlement by housing agencies. The other definition of consolidation that is more relevant to this study, is 'the process by which families allocated plots in the sites and services projects progressively develop them over a period of time' (Laquian 1983).

The level of consolidation can also be measured in different ways. In a squatter settlement, the level of consolidation can be measured by the extent of improvements made by households on their dwellings at a given point in time. In sites and services projects, on the other hand, the level is measured by the total number of houses completed to the required standards (quality and size) and occupied by the plot allottees at a given point in time. The minimum size of

units and quality of building materials are usually specified. This definition is adopted for the purpose of this study. The level of consolidation is said to be low when the actual number of houses completed to the required standards is short of that expected at the time of measurement. The extent of the low level is determined by the extent of the gap between the expected level and the actual level.

The most important factors to be considered when studying a consolidation process are the pace of consolidation, the cost and the methods used. All these three factors determine the direction of the process and influence its ultimate level. A slow pace of consolidation has been widely reported (Laquian 1983; Keare and Parris 1982; Bamberger 1982; Ward 1985 and Onibokun 1988) as one of the major problems in the World Bank assisted sites and services projects so far executed in most Third World countries. A number of factors have been found to affect consolidation, some of which are discussed in the following section.

4.2 Factors affecting consolidation process

The factors responsible for the pace, cost, scope and direction of consolidation are the most important to be identified in analysing consolidation (Laquian 1985). Most studies of basic housing show the following factors as having the most important influences on the housing consolidation: security of tenure; condition of dwelling at the start of programme; family income levels; housing design; types of building materials specified and the construction method used (Laquian 1985). Other socio-economic factors like reluctance of participants to leave their old communities, ownership of another property, level of education and type of occupation also have a significant influence on the process.

4.2.1 Security of tenure

The security of tenure has been shown to be one of the most important factors in the process of consolidation, particularly in squatter settlement upgrading projects. J.F.C. Turner (1966) in his work on the 'Barriadas' of Peru has observed that a relationship exists between security of tenure and housing

consolidation. His main hypothesis was that "If people were assured security of tenure they will voluntarily improve their dwelling to their fullest capability" and if people felt insecure, they will be reluctant to invest in their dwelling even if they can afford to (Laquian 1983). This hypothesis has been found to be true in many urban developments all over the world. However the question of land and land tenure is a complicated and sensitive one.

Different systems of land tenure are in use in different parts of the world. The most commonly used are the outright ownership system and common law system, both originating from colonial powers and spreading to the rest of the world (McAuslan 1985).

A). Outright ownership originated from France, Netherlands and Spain and spread to the different countries around the world colonised by them. This system of tenure gives rights to free ownership and disposal of land. Outright ownership is the most favourable option to prospective house builders/improvers. Outright ownership will make them invest as much and as fast as they can in their houses because they feel very secure. It was reported for instance, in the Tondo Project of Manila that once the security of tenure was assured by sale of land to the bona fide residents, the pace of consolidation accelerated rapidly (Laquian 1983). However this is not very favourable to the project management as it limits their control on the use of land. If, for instance, a road in the project needs to be lengthened or widened for which land needs to be acquired, the process is usually expensive, complicated and time wasting (Laquian 1983).

B). The other major land tenure system is the English common law system. This system which originated in England has spread to many of its former colonies, including India, parts of Africa, and the USA. This system gives a restricted ownership and rights to land. It allows authorities to retain some of control over land transfer, land use, acquisition by the state, taxation, and land development (McAuslan 1985).

i). Leasehold and freehold are two of the ways used to implement the restricted land ownership. In the leasehold arrangement, there is a landlord and leasehold. The leaseholder is permitted to use the land for a limited period of time,

anything up to 99 years or more, after which the land is returned to the landlord.

Freehold is very similar, except that there is no landlord between the occupier and the state (McAuslan 1985).

ii. Right of occupancy. This system that has been developed and use in Nigeria (Land Use Decree 1978), vests ownership and control over land in the state, who can give a right of occupancy to the public. This has some similarities to both the leasehold system and the traditional African system. In the traditional African system the land is vested in the hands of the local chiefs who give rights to the individual occupiers, while they retain total control of it and prohibited its transfer. A similar system is also used in Tanzania.

In the 'right of occupancy' system, although the state or president has some control over the land, they can grant permission to occupiers to transfer or sublet the land. The state however, retains the right to re-acquire the land for any development in the interest of the state. A lease term of up 30 years or more is often used and rent is also payable by the occupier to the state. In the 1978 Land Use Decree of Nigeria, a further provision was also made to discourage land speculations. This provision that is known as the 'half-hectare rule' prohibits any individual from holding more than half of a hectare of undeveloped land.

The leasehold appears to be the one most commonly favoured by aid agencies in many developing countries, their argument being that it allows sufficient time for housing investment to the beneficiaries while allowing the authorities to still maintain control of the land and regulate its uses. Some authorities give the beneficiaries a purchasing option after the lease period of 25 years during which they had monitored and controlled project development. This option is also favourable to the speed of investment because beneficiaries will invest in the fullest knowledge that an option to own the land after a few years is open to them. The main concern with this option is that allottees often sell their right to ownership even before they are legally entitled to do so. There is a concern that the low income target beneficiaries would sell their rights to a higher income group for immediate financial gains and drop out of the project. However, a

leasing arrangement is often made to prohibit this activity to make sure the project actually benefits the target group.

The hypothesis, that security of tenure influences investment in housing, has been fully exploited by the World Bank in their intervention to aid the low income housing sector in the developing countries, through sites and services projects. Beneficiaries were given titles to freshly serviced plots of land on which to build their houses, and in squatter upgrading, where existing slum settlements are provided with essential services and illegal occupants are given legal titles to their dwellings.

Many studies (World Bank 1982, 1983, 1985) have reported that these projects have increased the investment in housing by individuals. However there still leaves a lot to be desired in the speed and level of investments brought about by these projects. This is because security of tenure is a necessary but not sufficient condition for investment in housing.

4.2.2 The initial stage of the dwelling before the project

If the initial stage of the dwelling, before a project started is such that the level of basic needs required by a family already exists, majority of households will be reluctant to make greater improvements quickly. If on the other hand, the condition of the dwelling is very dilapidated at the start, the slightest opportunity will make households want to improve their dwellings. Consolidation will therefore be faster. This however is a more relevant explanation in upgraded settlements. In a freshly serviced site, the situation is almost the reverse, as was found by some studies, e.g that of Dadora project in Kenya. A wide range of options of levels of services and core units was offered to participants in the different sites and services projects according to their affordability. It is generally observed that the provision of a core unit and more, ensures quicker completion of a dwelling. A study revealed that consolidation was fastest where the highest level of services and core units was provided, and slowest where services were least (Laquian 1986). In the Dandora project, two basic options were provided. Option 'A', where a plot with only toilet, water connection and a party wall was provided, and option 'B', a plot with all the facilities in 'An' and a completed

room. Plots in option 'B', were occupied almost immediately after allocation, while further building activity was undertaken gradually. Type 'A' plots, on the other hand, required some initial investment by the households before they are habitable. So while the allottees of plots in option 'B', moved in and were advancing their building activities, the option 'A' owners took longer and invested more to bring their units to a habitable stage. This was further compounded by the fact that most of them lived far away from the project site and had to travel at a considerable cost daily to and from site. As a measure to encourage them to move to the project site, the construction of temporary shelters was recommended.

Although the provision of core units accelerates the pace of consolidation, it also has the major disadvantage of forcing households to use certain materials and makes them stick to the design arrangement dictated by the existing core units. This may be against their will as some studies have shown. Provision of a high level of services and core units also means an initial high cost incurred by the project's management. This will mean a high level of mortgage repayment that may be difficult for the majority of the beneficiaries to meet. The implication of this is that, where this option of higher level of services and core units is provided, it may only be afforded by a higher income group. Another disadvantage is that it imposes a certain design style and room arrangement pattern on the participants following the location of the core unit already provided. In some cases, participants were reported to have knocked down the core unit which they felt did not conform to their arrangements. This means an unnecessary waste of scarce resources.

4.2.3 Family income

The amount of disposable income available to the beneficiaries can also affect their ability to consolidate. The higher their income, the more able they will be to invest on housing and vice versa, particularly if they have large family commitment that is likely to consume all the income. Peter Ward (1976a) has shown in his study that the type of employment and the level of education of the beneficiaries is also likely to affect the level of consolidation. The better and the

more stable the jobs they have, the more willing and able they will be to invest in housing.

Income is the single most important selection criterion of the beneficiaries of basic housing projects, therefore it is anticipated that all other things being equal, selected participants should have adequate income to afford the cost of consolidation in these projects without any problems. However, this assumption does not take account of external factors like inflation. In most of the projects evaluated, it was reported that one of the main problems experienced is the rise in cost of building materials and labour due to inflation. In Senegal, for instance, the construction price index rose from an annual average of 180.9% in 1975 to 251.9% in December 1979. Also, over a period of 4 years (1976-1980), the price of a ton of cement in Dakar more than tripled (Laquian 1987). The rises in the cost of construction meant that the target group could no longer afford to build in the project.

4.2.4 House design standards

The issue of building codes and housing standards has for a long time been a major area of controversy in the provision of low income housing in the developing countries. The standards set are usually too high for the particular target group. Some of them are a direct copy from Western Europe and North America so are neither economically nor socially appropriate for the people (Mabogunje 1978). Therefore much of the low income housing provided by direct construction entirely misses its target and ends up in the hands of the middle income groups leaving the low income housing problem unsolved. The World Bank aided housing projects were meant to rectify this problem.

Since affordability was found to be the main issue in low income housing, the World Bank has tried to push for lower standards of both housing units and services to reduce the cost thereby increasing the affordability by their target group. The argument still remains as to whether the standards are low enough for the group of people in question.

Furthermore, even the Bank's proposed standards have been rejected by many housing authorities in the different countries, who still insist on the application

of their existing building codes and standards to the projects. For instance, in the Dandora projects, it was reported that progress in sites and services was hampered by the adherence to building codes and standards (Laquian 1983). Similarly in the Senegal projects, the recommendation of expensive design standards by the housing authorities was reported to have made consolidation difficult by many of the target households.

Therefore the issue of the right standards for low income housing still remains a problem. How does the cost of the existing standards compare to what they can afford? and how can the gap be narrowed to increase their affordability? These questions still remain as some of the main issues to be addressed in low income housing.

4.2.5 Types of building materials

In specifying the type of building materials for basic housing, factors like the cost of the materials, their availability, or scarcity, the skills needed to work with them and the peoples' attitudes to them must be taken into consideration. This is because they affect consolidation directly. If high standard imported materials are specified for construction, the cost would be high and consolidation slow. If on the other hand, locally available cheaper materials are used, the cost would be less and consolidation probably faster. Similarly if the type of materials specified are not readily available, it will hamper the progress of consolidation. Although the World Bank claims to have recommended the use of locally available cheaper building materials in the majority of the projects it has assisted, studies, particularly of the earlier projects (e.g. Senegal project) have revealed that some housing authorities tended to favour the use of permanent and expensive materials (Keare and Parris 1982). In the later projects, such as in Zambia, the use of locally produced sun-dried bricks and soil-cement blocks was recommended in the design. The main factor under consideration was the cost. It was estimated, when they were designed that the units built with local materials would cost half as much as those with imported materials. However, the major setback here is the peoples' attitudes to these materials. Most people felt that they were not good enough for them. Furthermore, contrary

to the project assumptions, the study of the *Zambian Project* by Bamberger (1982) revealed that it took longer to build with the soil-cement blocks than with hollow blocks. This was because of the lengthy processes and waiting times involved in making them ready for use. The hollow blocks, on the other hand were readily available in the market. People preferred to use the hollow blocks for reasons of aesthetics, and prestige. Many considered a house made of local materials as a poor man's house, and no improvement over their former house in the slum settlement. Also for families who were considering sub-letting their house, the use of hollow blocks was an important economic consideration because they attract higher rents.

4.2.6 The methods of construction used.

The extent to which self help labour and mutual labour are used will affect the pace of consolidation (Laquian 1983). Some studies, for example those of Keare and Parris (1982) show that self-help construction took longer to finish because most households did not have the technical skills for it, and being in full time employment could not devote much time to construction work. Evidence from the earlier studies has also shown that consolidation was faster in projects where hired labour and contractors were used (Laquian 1983). When self-help or mutual labour was used, there was the need to train and organise participants, which caused major delays.

4.2.7 Socio-economic factors

The socio-economic factors which affect consolidation include the following: house ownership; reluctance to move from former communities; household size; level of education attended, and type of occupation. If some of the households allocated plots already own houses outside the projects, they will have no urgency to consolidate and will therefore hold back their plots for the purpose of speculation. Also, some households may be reluctant to leave their old community for fear of losing intimate friends and friends in need. The coexistence of low income and high income families in most housing developments is very beneficial to both groups. Although this point may not be

relevant in some communities, in many Nigerian communities, it is a very significant point. While the low income earners render small services to the high income, they are paid in cash or kind. Also sometimes they are offered free meals by richer neighbours.

The level of education which determines the nature of a person's job and the amount of wages he receives affects consolidation in a similar way. Peter ward (1976) did an extensive study of these factors in three upgraded settlements in Mexico City. The three squatter settlements he chose for his study were at different stages of consolidation. He defined them as consolidated, consolidating and incipient. He carried out a comparative study of the settlements to find out what factors are responsible for the marked degree of difference in the level of consolidation (home improvements and extensions) between them. The results of the study showed that the age of household heads, their income levels, number of years spent in education and the type of work they were employed in, as the most important determinants of the level of consolidation.

Households who are less educated and in low paid jobs are economically insecure and have less ability to invest in housing, while those with good education and highly paid jobs invest and consolidate faster at the slightest opportunity. His Study also revealed that the older residents of the upgraded settlements were more willing to invest and improve their houses following the legalisation.

In addition to the above factors, people may also have different reasons why they do or not invest in housing.

The most important reason why people do not invest in housing, is that they may lack the means to do so. Many people's life-long ambitions are to own a house of their own, and given the means, the majority would invest in one. Another very important obstacle towards house investment may be the lack of security of tenure. Lack of security of tenure would do the exact opposite of what security of tenure (discussed above) does. People would not invest in a squatter dwelling, even if they had the means, for fear of being relocated and entirely losing what they had invested.

The most important reason for people to invest in housing is the need for a house, both for the individual and the family. The greater the need, the more likelihood it is for households to invest at the slightest opportunity.

Also some may want to own a house for economical reasons, as an asset or to sublet and get income, or simply to avoid paying rents. Others may want to invest towards a house for the future. For instance, in the event of death of the family's wage earner, who pays the rent, the rest of the family would have something to fall back on. Some may even invest in building their own house to change their social class from renter to house owner, which might seem to be more prestigious.

4.3 Causes of the low level of consolidation in Sites and Services Projects

The following have been identified by earlier studies as probable causes of the problem of the low level of consolidation in sites and services projects: a) high cost of consolidation relative to participants affordability, b) lack of access to adequate building loans, c) subsidised building and d) technical assistance from the project authorities; e) delayed provision of basic services to project sites; f) remote location of project sites and socio-economic causes which include: g) the reluctance of participants to move from former communities, ownership of another property, h) level of education, i) types of employment, and j) large household sizes. Some of the causes are elaborated in the following subsections.

4.3.1 High cost of consolidation relative to participant's incomes

The high cost of consolidation in most project has hampered their progress

If the cost of consolidation is higher than the participants can afford, there will be a consolidation problem in the project. A number of factors such as prices of building materials, labour and land determine the overall cost of consolidation.

Affordability is the major consideration in the design of the Sites and Services Projects. Despite this, evidence from the evaluation of projects has shown that most target groups can not afford the cost of building on the piece of land allocated to them. The affordability problem in this project often arises as a result of the gap between what people can afford and the actual cost of

consolidation. This could be due to high design standards as in the case of Senegal, evaluated by Keare and Parris (1982). They reported that in this project the low level of consolidation was partly due to the expensive design suggested for the project dwellings. It was also reported that the project authorities made a design of model houses which the participants were persuaded to copy even though it was well known that they could not afford them. They also observed that the households did not only adopt these design standards but attempted to build and finish their units in a single phase. The result was that many plot allottees abandoned their unfinished units.

The gap between affordability and the cost of consolidation could also result from wrong calculations and assumptions of affordability made by the project authorities. For instance, households may not be willing to spend up to the 20% of their income on housing that was assumed by the World Bank in calculating affordability of most of their assisted projects. Also the majority of household may not have savings or other sources of borrowing to supplement the project loan for building.

Problems may arise in verifying incomes of self employed participants and therefore wrong figures may be used.

Other factors which can affect the cost of consolidation may be external to the projects, such as inflation and pricing policies. If high inflation raises the cost of building materials and labour, the original target plot allottees may lose the affordability to consolidate. This is particularly so if project implementation is delayed. In many Developing Countries, inflation rose by several hundred percent in the recent years thereby escalating the cost of everything including building materials, in Nigeria and Senegal. In Senegal for instance, Keare and Parris (1982) have reported, that a ton of cement tripled its price in four years between 1976 and 1980.

Similarly in Nigeria, between 1978 and 1988, the price of cement rose by 250%. Studies of earlier projects (Keare and Parris 1982, Bamberger 1982, 1983) have also shown that the majority of project participants tended to use paid labour rather than the free self-help assumed. The added costs of labour meant an increased cost of consolidation. Consequently if the target group could no

longer afford to consolidate, they may sell their right to ownership to a higher income group. This may lead to a gradual displacement of the target group and a shift of the benefit to an unintended group.

Some project authorities (e.g. in Senegal, Zambia and Nigeria) have raised the income band for participation, thereby allowing some middle and high income households to participate. This further reduces the access to the project of the originally intended groups. For instance in the Senegal project, the income band was raised twice, first from CFAF14 500 to CFAF15 000-45 000 and then to CFAF18 000-415 000 (Laquian 1986).

4.3.2 Lack of sufficient support by project authorities

The provision of a serviced piece of land is a necessary and most important condition but may not be sufficient for consolidation to occur. Additional support had to be provided to some beneficiaries to help them consolidate. Such support included: the provision of cash and/or materials loans; provision of technical assistance and the availability of building materials at an affordable price by the beneficiaries. It has been widely reported in many evaluated projects (e.g. Senegal, Zambia and Makama) that many of the target beneficiaries blamed their inability to consolidate on the lack of a sufficient project loan. This is because most low income participants did not have savings or other sources of finance and depended totally on the project loan for consolidation. For instance, a survey of the Senegal project revealed that 92% of participants said their construction was to be fully financed by the project loan (Laquian 1983). Personal savings were used in only 8% of the cases and other banks' loans were inaccessible to the project participants. The few commercial banks in most Third World Countries, which provide finance for housing, prefer to give to the higher income groups for security.

Regarding the building materials, many projects, particularly more recent ones, did not provide subsidised building materials to the participants. The plot allottees had to use what little loans they were issued to purchase the materials

on the open market. This, in many cases, could not buy them enough to complete their houses.

The earlier projects which operated building materials stores, issued vouchers to beneficiaries for purchasing building materials (as discussed in chapter 2). Because the stores provided a very limited choice of materials, many families felt that were being forced to use specific types of materials which they did not like. Also running the stores proved difficult, especially in terms of keeping up with the demands. People had to queue outside the stores for days. So this idea was dropped in the later project.

Technical assistance also is crucial to those households who want to engage in self construction. Again it is the poorer households who can not afford the cost of hiring labour. Keare and Parris (1982) in their study, showed that self help construction was significant among the poorer participants. Their consolidation process will be slowed if they are not given the required technical assistance. It takes longer, and materials are wasted if they have to build by trial and error. This becomes more difficult if they are forced to use the type of materials with which they are not very familiar. The evidence from other projects has shown that technical assistance was not made available to the participants. The lack of technical skill has discouraged many households from engaging in self-help labour. For those who could not afford to hire labour, the only alternative was not to build anything on the plot until when they could afford to pay.

Insufficient supports for participants may either be due to faulty project planning, in which they were not included, or proposed, but not implemented. The latter is more common among the group of projects in this study.

In an attempt to tackle this problem, some project authorities, (e.g. in the Makama and Senegal projects) had to increase the amount of loan.

It was reported in the Senegal projects that the loan was raised from CFAF275000 - CFAF415000 (Laquian 1986).

However, there was a limit to how much increase they had to offer and also because the size of loan had to take into consideration what people were able to repay. Increase in the size of loan, meant an increased amount of monthly

instalments which the majority of the poorer participants may not be able to meet.

4.3.3 Delayed provision of services to the project site.

The delayed provision of services to the project site by the project's agency has also been reported to have contributed to the low pace of consolidation in some projects. It was reported in most of the earlier projects that the majority of households will not move on to a site until basic services are in place. One of the most important basic services on site, for consolidation, is water which is not only needed by households for drinking but also for construction on their allocated plots. Delayed provision of water to the sites meant a delayed consolidation process, and the lack of street lighting has also been found to discourage it. In the survey of the Senegal Project, when participants were asked why they did not move on to the site, even though they had completed their basic units, the reasons given included: lack of essential facilities on site (42%); unfinished fencing around the plot (21%); lack of police station, market or community toilets (16%); and 21% other reasons. The pattern of these responses reveals that lack of services and infrastructures were responsible for the delayed movement to the site (Laquian 1984). The delayed provision of the services in most of the projects has been attributed mainly to lack of inter-agency co-ordination and lack of sufficient funds (Keare and Parris 1982).

One of the measures suggested to rectify this problem was the phasing of service provision during implementation, beginning with the most important services for consolidation like water supply and electricity and adding the less important ones later.

The best solution of course is to provide all services at the beginning, and in time for participants to move in and consolidate. This was found to be very difficult in most project, because of the manner in which project funding was released. For instance, in the Makama project, it was found that inconsistent and delayed release of funds by the project financier has contributed to the overall delay in the implementation of the project.

4.3.4 Project location.

The earlier sites and services were often located on the outskirts of the city far from the centre, on the grounds that land was cheaper there (Swan 1983). In many projects located on the periphery, it was found that the target group were reluctant to move to new sites due to lack of access to employment or easy transportation to the city centre. However this problem has been overcome in some of the later project. For instance, in the Makama project, though the project is not exactly in the town centre, the easy access and relatively inexpensive transportation costs have solved the problem.

Also, contrary to the project assumption that households would build basic units and move into them while extension went on, in most cases they did not. The erection of temporary shelter on site during consolidation was discouraged by most local authorities. Their argument was that temporary structures would spoil the appearance of the environment (Laquian 1983).

4.4 Summary and Conclusions

Consolidation, for the purpose of this study, was defined as the process by which households allocated plots in the Sites and Services project gradually developed them to the authorities required standards over a period of time.

Consolidation in aided self-help projects generally has been found to be influenced by a number of factors, some of which include the following: security of tenure; initial stage of the dwelling; family income; design standards; types of building materials and methods of construction used; and socio-economic factors including; the reluctance of participants to move from former communities; ownership of other houses; level of education; types of employment and large household sizes. The low level of consolidation, in the sites and services projects particularly, has been attributed to a number of causal factors, some of which include the following: high cost of consolidation relative to participants' affordability; lack of access to adequate loans, subsidised building materials and technical assistance from the project authorities; delayed provision of basic services to project sites and remote location of project sites.

Some of the explanations are, however, more important in some projects than others depending on the particular circumstances of the project.

It is important to note that most of the factors identified did not result from academically oriented empirical studies of the projects described. It is therefore the concern of this study to devise a testable hypothesis based on the literature and personal understanding of the study problem. The factors in the literature which will be used in formulating the study hypotheses include: the high cost of building relative to the income of target beneficiaries, lack of access to adequate building loans, and the methods of building used. Based on the knowledge of this project and of the beneficiaries, the study will also test the inadequacy of the size of the basic unit specified to the target group. The hypothesis thus formulated has already been stated in the introductory chapter. The next chapter (5) discusses the methods of testing the hypothesis.

Chapter 5 : Methods of testing the hypothesis

5.0 Introduction

The previous chapter (4) was a review of the literature on the causes of the low level of consolidation in sites and services projects, from which the hypothesis for the study was partly formulated. This chapter discusses the methods used in testing the hypothesis. This involves determining the nature of data required, methods of gathering the data and the analytic techniques used. The chapter is in three sections, with the first restating the hypothesis and discussing the nature of data required to test it. The second section discusses the sources of the data and the methods used in gathering them, while the last section is on the analytic techniques used in testing the hypothesis.

5.1 The Nature of data required

The principal hypothesis for this study is that the low level of consolidation by the target beneficiaries of the Makama project is caused by inaccurate estimates and assumptions made by the project Planners regarding their affordability, needs and preferences.

The statement means that Planning errors have been committed in this project which were assumed to be responsible for the existence of the research problem. The areas where these errors occur are in the affordability estimates, the determination of the needs of the target beneficiaries, as well as their housing preferences.

Affordability, for the purpose of this study, is used to refer to the ability and willingness of the target beneficiaries to pay for the cost of the basic unit. Inaccurate estimates will then mean that the planners have overestimated the cost which the target beneficiaries were willing and able to invest in building their units. Needs here refer to the target beneficiaries' spatial needs (number of rooms) in the basic unit. Wrong assumptions regarding preferences here mean that what, and how the target beneficiaries preferred to build are different from what it was assumed they would prefer.

The principal hypothesis is simplified into a measurable form as stated in chapter one (1.2.3). The data required to test the hypothesis is determined by the parameters to be measured as follows:

1). The actual cost of building a basic unit with required materials (concrete and factory burnt bricks) is significantly higher than the target beneficiaries could afford.

To test this hypothesis, two parameters had to be measured and compared. The two parameters are: a) the actual cost in Naira of building a basic unit. b) the cost in Naira affordable by the target beneficiaries. To get the required data, the cost had to be determined by using both the builders' estimates as well as the market estimates of the cost using the specified materials.

Data for the cost which the target beneficiaries could afford were determined from what they said as well as on estimate of how much it cost them to build their uncompleted units. Also data on the amount of loan given as well as the availability of other sources of finance like savings, other borrowing and donations were used in determining the actual amount of money available to the target beneficiaries to invest in building the basic units.

2). The target beneficiaries preferred, and used, hired labour in building rather than the self-built methods assumed by project planners. It was also thought that the method of labour (hired labour) which the beneficiaries preferred to use had increased the over all cost of consolidation. Data required here covered the actual method which target beneficiaries used and methods assumed by planners.

Data on the estimated cost of hired labour was also required to show how its use of hired labour has significantly increased the cost of building a basic unit. Although reliable data on how much was spent on labour could not be obtained, the general estimated cost of labour for building similar units in the rest of the town was used. An estimated amount of between 15 - 20% of the total cost was generally paid towards hired skilled labour.

3). The size of a basic unit (number of rooms) which the target beneficiaries needed is significantly less than that assumed by the project planners. For this hypothesis, two measurements were obtained and compared. i). the number of rooms proposed by planners and ii). the number the target beneficiaries needed. The information regarding the number of rooms needed was obtained directly from asking the target beneficiaries,

and by observing their building practises both in the project and outside it. The two measurements were compared to establish the extent of the gap.

5.2 Sources and methods of data collection

The data required for this study were collected from both primary and secondary sources using various techniques. This study, being a case study in nature, most of its secondary sources of information are documentary, including: administrative documents, project proposals, progress reports and other written reports on the project. The primary data were mainly obtained from a questionnaire survey, direct observation and interviews. The main methods include: informal discussions with the beneficiaries and project officials, personal observation, and direct interviews, which involved asking questions directly to extract the required data.

5.2.1 Informal discussion

Informal discussions and interviews were held with the project's officials and some of the project beneficiaries. Some of the project officials interviewed included the Project Manager, Project Architect, Surveyor, Accountant, Land Officer, the Federal Mortgage Bank Manager, some members of the plot allocation committee and many junior workers who took part in the implementation of the project. They were asked mainly open ended questions about the planning and implementation of the projects and their general opinion on how things went. They were also asked some specific questions to confirm certain aspects of the projects already reported in documents.

5.2.2 Personal observation and photography.

This was the first stage of the field work undertaken. The whole project area was observed. The purpose of this was to make the researcher familiar with the area, understand the road pattern and become acquainted with the respondents whose maximum co-operation was needed in the later stage of the survey. Observation techniques were also necessary to assess the progress of consolidation. This was done by physically counting, the number of houses completed, the number uncompleted and the number of unfinished houses at the different stages of constructions. Also to note, in addition to asking people, the type of materials used. Photographs were taken to show

the type of houses built, the general look of the project area at the time of survey, the nature of uncompleted or abandoned houses, and the quality of finished houses on the project site.

5.2.3 Questionnaire survey

The questionnaire's survey was the major technique used for the collection of the primary information from the beneficiaries of the project. This involved the design of questionnaires, selection of the study sample (sampling procedure), a preliminary pilot study, and the administering of questionnaires to the selected sample. The various responses from the questionnaire survey constituted the major information upon which the hypotheses were examined and tested. There are various techniques which are generally used to administer questionnaire based surveys. These include mail questionnaires, personal interviews and telephone interviews. Both the mail questionnaire and the telephone interviews have been found to be unsuitable for this research, because respondents often have neither correct postal addresses nor telephones. Also, mailing questions reduces the control of researcher and his freedom to probe or explain beyond what is stated in the questions. Furthermore, the response rate for mail questionnaires is often low. Therefore the personal interview technique using structured questionnaires was chosen for its obvious advantages of greater freedom and control by the researcher, higher response rate and more flexibility and opportunities to obtain details of reactions while observing respondents.

5.2.3.1 The questionnaire design

The design of a questionnaire for a survey is based on the assumption that, it is possible to formulate questions and phrases with an identical context which have the same meaning and are equally meaningful to all respondents (Bailey 1987).

The questionnaires translate the research objectives into specific questions, the answers to which will provide the information needed to test the Hypotheses. Some of the things taken into consideration in designing the questionnaire included: the content, format and sequence. The content was such that it probed for as much relevant information as possible. The questions were also made as precise as possible. Questions which were either embarrassing or annoying to the respondents were avoided and their proxies were

used where possible. The format of the questions is both open and close ended. In close ended questions, care was taken not to suggest or force answers on respondents. They were always given a chance to give a different answer from the options suggested if they wished, e.g. an option like, "other and then specify" was included to take care of that. The sequence of questions moved from easy ones to more difficult ones to build up respondents' confidence and enthusiasm. The most difficult or more sensitive questions were left to the end.

The questionnaire covers all major aspects of the factors which were assumed to be responsible for the problem being studied. Also other factors on the socio-economic and housing characteristics of the target beneficiaries, which are considered important in supporting certain explanations were included. The main content of the questionnaire is as follows:

1) Extent of the low level of consolidation in Makama project. This section of the questionnaire is meant to show the magnitude of the research problem at the time of survey. Questions asked here concerns the speed and pace of consolidation. The variables to be measured include: the duration of consolidation (in years); dates of plot allocation; methods of plot acquisition; the stages of consolidation reached on unfinished units; and estimates of completion time (in number of years).

2) Causes of low level of consolidation

This section asks questions which relate directly to the assumed causes of the problem as stated by the hypotheses. Questions were asked on each of the aspects of the hypotheses. These aspects were:

a) Reasons for the lack of consolidation

The actual cost in Naira of building basic units; prices of building materials required, methods of construction used and the reason for these, cost of labour hired, the amount which is invested in housing monthly by target beneficiaries.

b) Size of basic unit

Questions in this section are meant to provide data on the size of basic units proposed by the project as well as actual sizes of housing units measured by the number of rooms needed by the participants in the project. For the project proposal, the data is available in the project documents. For the sizes of units needed by the participants, two methods

were used. The first was to ask individuals their requirements and the second was to observe their practices in both their traditional areas and the new project area.

c) The amount of loan available.

Questions here include whether the project loan was taken, how it was utilised, the amount given, its sufficiency, and the availability, or lack of other sources of finance. d) Methods of construction used.

It was assumed that the majority of target beneficiaries had used or attempted to use paid labour rather than the self-built method assumed by the project. Questions here were on methods of construction used, and how much was paid towards labour were it was employed.

e) Socio-economic characteristics of target project beneficiaries.

Certain socio-economic factors, as discussed in Chapter four above, have been shown in other studies to affect consolidation in the earlier projects. Although they are not the main factors in this project, they could be used to support the findings of the study. The variables to be included in the questionnaire include: the household size, head of household's occupation, income, and level of education.

f) Housing characteristics of project consolidators and nonconsolidators.

In Chapter one (1.1.3) it was pointed out that one of the consequences of the research problem was that the nonconsolidators were living in worse housing situations than the project house owners. To verify this, the housing characteristics of the whole surveyed sample were investigated and a comparison was made between the characteristics of nonconsolidators and consolidators. The parameters to be included in the questionnaire are: the quality of building materials, level and availability of services and the costs of housing. The cost of housing (in Naira) here refers to the running cost of current housing. Data required included the number of rooms in their houses, quality of building materials used to build houses, availability of electricity and sources of water supply and also types of sanitation (toilet facilities).

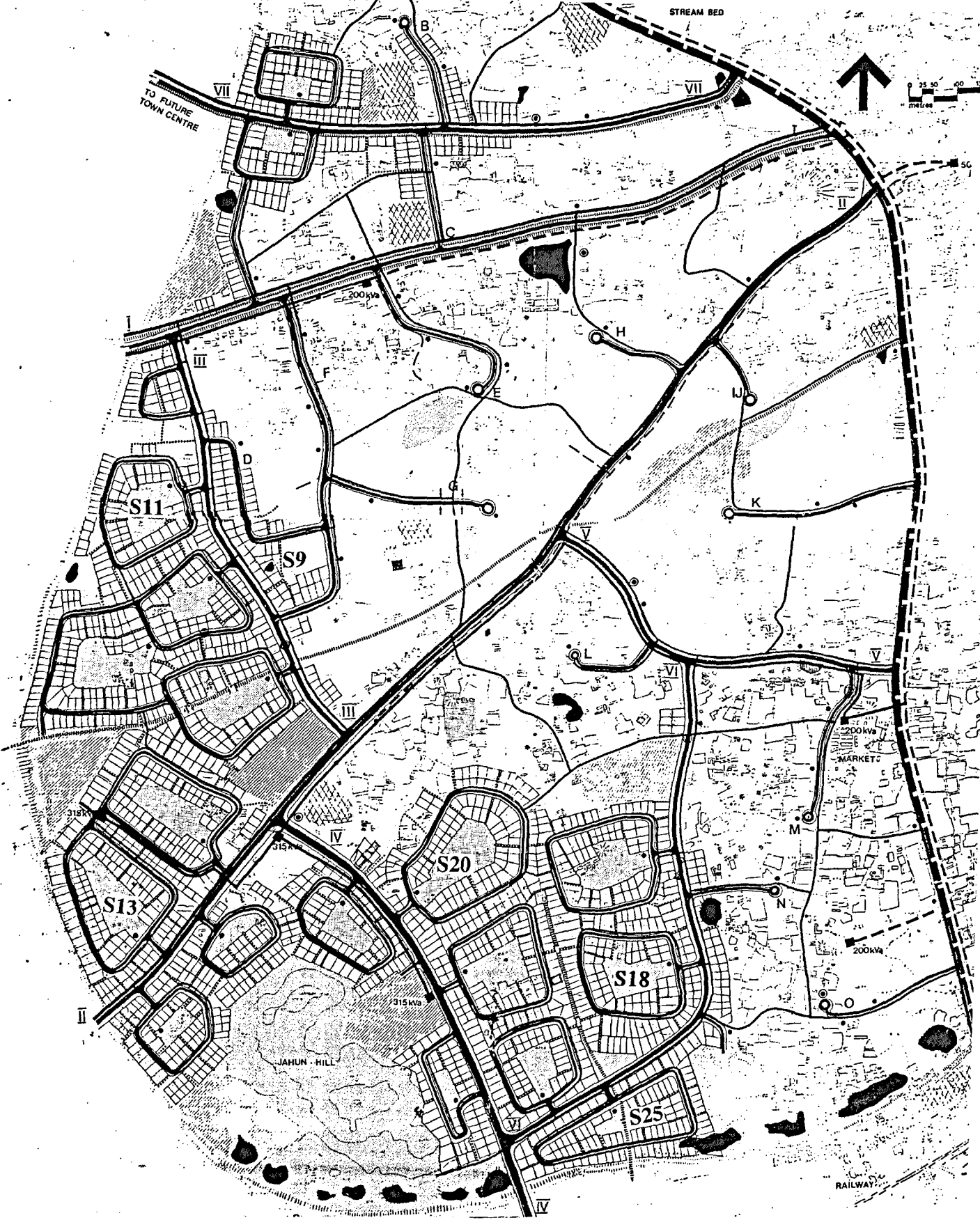


Figure 5.1 : Sites and Services Area showing the Surveyed clusters.

Scale: 1:6250

Source: World Bank Project Implementation unit

5.3 Sampling

Having designed the questionnaire, the next task was how to administer it. The direct interview methods have already been chosen as the most suitable technique to administer the questionnaire for this study, however, the sample population on which to administer it has to be selected. This procedure which is known as sampling is necessary partly because it is almost impossible to survey the whole study population, due to the limitations of time and resources. Moreover, results from a carefully selected manageable sample size can give a high degree of accuracy of conclusions about the entire population group.

The main emphasis in selecting a sample is to make it as representative of the population group as possible, so that a conclusion on the whole population can be drawn. For the purpose of this study, the following procedures have been undertaken to select the required sample.

5.3.1 Sample size and sampling techniques used for the survey.

The project provided a total of 2100 plots organised into 18 clusters, each of which forms a small neighbourhood sharing common facilities like public pumps and open space. The sizes of the clusters vary widely in the number of plots as well as the available open spaces. The total number of allocated plots (2,100) forms the total study population. A sample size of 300 participants, which is about 7% of the total number, was aimed at for the study. The sample size was determined based on the preliminary sample surveyed and the level of acceptable error decided on. A review of the available sampling techniques (Bailey 1987, Nachimias 1981) has led to the choice of the three different variants of the probability techniques which are aimed at making the sample as unbiased as possible. The techniques used are simple random, stratified and systematic.

i). Stage 1: eighteen different clusters of varying sizes and level of consolidation were identified in the whole study area. Using a simple random technique, the names of 6 (1/3) clusters were drawn from a box containing all the eighteen. The clusters picked as

shown in Fig. 5.1 on the page 121, are S11,S13,S25,S9,S18 and S20 with a total of 1,300 plots.

ii) Stage 2. stratified sampling. Due to the nature of the information required, it was necessary to select two different samples for the interview. One sample to be drawn from the plot allottees who have not consolidated or completed consolidation in the project yet. The second sample to be drawn from beneficiaries of the project who are currently living in the project site either in a rented house or in their own consolidated houses. This meant that the plots in each of the clusters chosen had to be divided into two strata: one representing the finished and occupied houses, and the other representing the uncompleted houses and undeveloped plots which have already been allocated.

iii) stage 3: systematic sampling. In each cluster, the required sample for each category was selected by systematic sampling technique. A total of 313 plots, comprising both consolidated and unconsolidated plots in the appropriate proportions, were selected from all the study clusters on which the questionnaires were administered.

5.3.2 Pilot study.

The pilot survey for the study was carried out in January 1992. Using purely simple random techniques, the preliminary questionnaire was administered on 75 households. The pilot study was undertaken for the following purposes: a). to get more acquainted with the layout of the area and understand the street patterns for easier orientation during the actual survey, b). to determine how easily understandable and sensitive some of the questions were and how to minimise their effect on the respondents. c). to allow for proper design of survey strategy and approximate estimate the time required to conduct the actual survey, d). to experience some of the problems that may be encountered and devise ways of minimising them during the actual survey.

5.3.3 Final survey

After the pilot study, the questionnaire was revised and necessary changes were made. Some questions were modified or omitted while others were included accordingly. Some of the major problem areas discovered during the pilot survey which were taken into consideration in the final survey included:

a) The language problem. The original questionnaire was designed in English only. It was discovered that many beneficiaries could not easily understand nor express themselves very well in English. So a translated version of the questionnaire, in the local language (Hausa), which is also understood by the researcher and the enumerators, was prepared.

b) Many respondents had a feeling of being used. They said they were fed up with the project implementation unit always distributing questionnaires asking about their problems and never doing anything about them. So during the final survey, the enumerators were instructed to give a clear explanation of the purpose of the study while making it obvious that it had nothing to do with the project unit and was totally in their interest. Also respondents were reassured that all information would be kept in confidence and the investigation was going to be of practical value. Because of this problem, no member or staff of the project unit was used for administering the questionnaires.

c) Another important point noted during the pilot survey was the lack of credibility of some enumerators. It was discovered from one of the of students who had been involved in administering questionnaires for similar surveys, that some questions were filled in by them without even going to site. This information was taken seriously in this survey. As a result, the enumerators used for the survey were trained and the purpose and importance of the study was clearly explained to them. Also the administration of the questionnaires was properly supervised. To reduce the temptation of cheating, their pay was determined by the hours of work and not number of questionnaires administered. Also to make sure that the enumerators actually visited the house, they were asked to bring back the paper stickers with numbers used to mark houses prior to the survey.

d) General attitudes to females. Also it was discovered in the pilot survey that people, because of their prejudices, generally responded less enthusiastically to female enumerators. For this reason, all the four enumerators appointed were males except for one female assistant.

With the help of four trained enumerators, the questionnaires were successfully administered over a period of twelve weeks between February and May 1992.

5.3.4 Limitations of the survey

The response rate was very good, up to 90%, but certain problems were encountered during the survey which include the following:

- i) Time: It took longer than the estimated time to administer the questionnaires. This is partly because most respondents were employed and could not be found at home during the day time. Therefore they were only available in the evenings and at the weekends.
- ii) Unreliable addresses. Tracking down the nonconsolidators was difficult. Since they were not resident in the project site, they had to be traced to their current addresses. Their addresses held by the register of the project unit, mostly give only the general area with no street name or house number. To trace them would have been impossible without the help of the surveyor of the project implementation unit who knows virtually all the beneficiaries personally. With his assistance, 80% of the intended respondents were traced to their work places or houses successfully, and interviewed. The other 20% accounted for those who have either passed away, migrated or could simply not be traced.

5.4 Methods of data analysis used

Data analysis involved the translation of the information gathered from the field survey into forms amenable to quantitative measurements and comparisons in order to evaluate the researcher's propositions and hypotheses. Data analysis usually requires statistical techniques which will help the researcher to identify and recognise some patterns and regularities in the data. This will in turn enable the researcher to draw meaningful conclusions about the data.

5.4.1 Data form

The types of data gathered took three different levels of measurements:

categorical or nominal, ordinal and interval levels. i). Categorical data is that which is grouped according to names or categories. Examples of data with this level of measurement are: marital status which has: married, single, divorced and widowed categories. The tenure type is also another example of categorical data, categories here being renters, owners and squatters.

ii) Ordinal Interval data is also classified but, unlike categorical data, is also ranked. This implies one class is greater than the other. Income levels classified into high, middle and low, is one example of ordinal data. Occupation categories classified from the highest managerial level to the lowest clerical, is another example. Although this type of data is ranked, it is difficult to assign values at equal intervals to the rankings.

iii) Interval level of measurement does not only classify and rank, but also specifies by how much one rank is greater than another. It gives precise numerical information and is often regarded as the strongest level of measurement. It was possible to create ordinal data from interval data, and categorical from ordinal, but not vice versa.

5.4.2 Coding of the data

Both the categorical and ordinal forms of data gathered were as the phrases and statements made by the respondents. To make the data easily readable by the computer, the statements were represented by numerical codes. The interval data, which was already in numerical form was left as they were. Numbers between 1 and 9 were used. The code attached to a statement has nothing to do with its weight, weighting of responses was done separately where necessary.

5.4.3 Data entry and exploration.

The coded data was entered into a file created in the data entry programme of the SPSS/PC+. After the data had been entered, a general exploration was undertaken by producing initial frequency tables and crosstabulations to inspect the data and see; (a) whether the data have been correctly transcribed, (b) if any variables need modifying or transforming, (c) whether some responses need recording, and (d) whether any cases are so extreme that they can be considered as outliers and may need to be excluded in the data set for final analysis. (d) The exploration of the data had also helped in modifying the hypotheses where this was necessary.

5.4.4 Statistical analysis.

The purpose of the statistical analysis is to enable the researcher to confirm whether the hypotheses he put forward are acceptable or not, in the light of the evidence provided by

the data. The main techniques found to be most suitable to carry out the tasks in this study are: frequency distributions to compare the frequencies of certain responses with others; the chi-square test of independence to find whether there is an association between categorical variable; and the t-test to compare the group means of interval variables.

5.4.4.1 Frequency distribution

Frequency distribution was the very first analytic technique undertaken. This task was used to examine the pattern of responses to each of the variables under investigation. Interval variables like income, and ages had to be summarised into categories of equal intervals to give a shorter distribution table. The proportions and percentages of the distribution in each category permit meaningful comparisons between them.

5.4.4.2 Chi-square test of independence

The chi-square test was based on the assumption (null hypothesis) that two variables are independent of each other if the probability that a case falls into a given cell in crosstabulated tables is simply the product of the marginal probability of the two variables defining the cell.

This statement is either accepted or rejected depending on the chi-square value as well as the significance. The significance value of 0.01-0.05 was considered enough to reject the null hypothesis. However anything higher than 0.05 led to the acceptance of the hypothesis. Where the hypothesis was rejected, it implied that, there is an association between the variables crosstabulated. However the degree and direction of the association are not revealed by the chi-square. Other chi-square associated statistics as Cramers Vs were used for this purpose.

5.4.4.3 T-test for comparison of group means

The t-test was used to compare the group means of interval variables. The null hypothesis for this test was that the difference between the means of two groups is not statistically significant. The purpose of the test is either to accept or reject the hypothesis. The two different types of t-test generally used are: the paired t-test and the independent t-test. Only the independent t-test has been used in this study.

Table 5.1 Summary of survey methods and analytic techniques

Factors	Measurements and tests	Data collection methods	Statistics used	Level of Significance
1. Cost of construction	a) actual cost b) affordable cost compare $a > b$	i. Questionnaire survey ii. Market survey	t-test frequency distribution	0.05 or less
A. Size of project loan	a) amount given b) amount sufficient compare $b > a$	i. questionnaire survey	frequency distribution	proportional difference = or $> 10\%$
B. Construction method used	a) method assumed b) method preferred a different from b	i. Questionnaire survey ii. Market survey	frequency distribution	frequency distribution
2. Number of rooms in a basic unit	a) proposed number b) needed number compare $b > a$	i. Questionnaire surveys	i. T-test ii. Frequency distribution	0.05 proportional difference
Housing characteristics of a) consolidators b) nonconsolidators	compare quality $a > b$ cost $a < b$	i. Questionnaire survey ii. Observation	I. t-test ii. Frequency distributions	0.05 proportional difference = or $> 10\%$
Socio-economic characteristics of sample a) consolidators b) nonconsolidators	compare a & b for the following: i. Incomes, ii. Household sizes iii. Occupation iv. education v. marital status	questionnaire survey	i. chi-square - Cramer's V ii. Frequency distributions	proportional difference = or $> 10\%$

5.5 Summary and Conclusions

The methods of testing the hypothesis discussed above were based purely on scientific procedures. The secondary data came mainly from the literature review while the primary data from a field survey of the project being investigated. The primary data which was used directly to test the hypothesis was collected by a questionnaire survey of a randomly selected population sample of the project beneficiaries. The data was analysed using the Statistical Package for Social Sciences (SPSSPC+). Both descriptive and confirmatory techniques were used. The descriptive techniques included frequency distribution represented in the form of tables, charts and histograms. The confirmatory techniques used include, a) the chi-square test of independence for categorical and ordinal data and b) the t-test for comparing group means mainly with interval variables. The findings of the survey are presented in the next two chapters (6 & 7). Chapter six presents the general findings on the socio-economic and housing characteristics of the surveyed sample, while Chapter seven presents the specific findings of the hypothesis test.

Chapter 6: Survey findings on Socio-economic and housing characteristics

6.0 Introduction

The previous chapter (5) covered survey methods and analytic techniques used in this study, this chapter therefore presents the general survey findings on the socio-economic and housing characteristics of the whole sample. The presentation is in two stages, starting with the characteristics and then a comparative analysis of them between the groups in the sample. The chapter is in four sections. The first section outlines and defines the three different groups comprising the surveyed sample, while the second section presents their social and economic characteristics. These include sex, marital status, household size, level of education, types of employment, as well as their income distributions. Some of these characteristics, namely income and employment influence the ability to invest in housing. It is therefore hoped that they will provide supporting factors in explaining the causes of the research problem. The third section analyses their housing characteristics which include quality of housing. These include; sizes of dwellings, standards of materials used, occupancy rate, level of services and running cost of housing. The comparison of the housing characteristics of nonconsolidators with those of consolidators, will help to reveal the group which is worse off. This will in turn provide supporting evidence for the need for urgent intervention. The last part summarises the findings and draws conclusions.

6.1 Housing categories of the sample

Table 6-1: Housing categories of the sample

Housing Status (tenancy)	frequency	
	No	%
Consolidated house owner	102	36.8
Renter of project house Nonconsolidated	60	21.7
plot owner	115	41.5
Total	280	100

Source: Field Survey, March 1992

The above categories resulted from a random selection of two separate samples from all of the project beneficiaries. As described in Chapter 5 above, one sample was drawn from the nonconsolidating plot owners and the other the occupants of project houses (some of who are owners and some renters).

The overall sample however reflects the actual distribution of the groups in the entire project population by nearly 100% (97%).

6.1.1 House owner (consolidators)

These are households who have completed the process of consolidation and are living in their houses. For the purpose of this study, the minimum habitable unit is taken as the two bedrooms basic house with service core comprising of a kitchen and toilet/bath built with the minimum acceptable materials specified by the project authorities. All households who have completed and moved into such a unit or a larger one, can be said to have consolidated their plots fully. However, in this project various levels of consolidation well above the core unit are very common. The house owners constitute 36.8% (102) of the total sample interviewed.

6.1.2 Renters

These are the tenants in project houses and they make up to 21.7% of the sample interviewed. They rent either part of the house, sharing with other tenants, or the whole house in the case of larger families. This group apparently turned out to be a large one indicating the likelihood of project being commercialised in the long term. Subletting which was encouraged to allow participant get extra-income was not popular at all in this project. People either let the entire property and lived elsewhere (absentee landlords), or occupied the entire house with the members of their family and other non rent paying relatives.

6.1.3 Nonconsolidated plot owners

The nonconsolidated plot owners constitute up to 41.5% of the sample interviewed. This category refers to those plot allottees in the projects who have not built at all or completed the process of building their houses to a habitable level. The nonconsolidators interviewed were in two different sub-groups. The first subgroup comprises those who were allocated plots in the beginning but later dropped out of the project for some reason. The second sub-group are those who held on to their unfinished houses at various stages of construction, but had taken longer time than expected, and made very little, or no progress.

6.2 Socio-economic characteristics

In this section, the general social and economic characteristics of all respondents will be discussed first, and then they will be analysed comparatively. The tenure categories discussed above are used to distinguish the groups being compared. Crosstabulation was used to make the comparison, while chi-square and associated statistics were used to determine the association and its significance. The null hypothesis, in each case, is that there is no association between the characteristic and the tenure category of the beneficiaries. The characteristics to be compared include: sex, marital status, household size, level of education, types of occupations and income levels. A t-test was also done to see whether there is a significance difference in the income means for the consolidators and non-consolidators.

6.2.1 Sex

The sex of household heads in this project does not vary much. Up to 95.7% of household heads are males while only 4.3% females, out of the population sample interviewed. Generally, females in this part of the country rarely own land or property because of the dependency role the society expects them to play. This is partly why the proportion of female headed households is very small in this project. Out of the 4.3% females who are heads of households, 80% inherited the houses from their dead spouses. Only the remaining 20% said they owned the houses from the beginning and are independent females undertaken in some kind of trading business.

6.2.2 Marital status

An analysis of the marital status of the household heads in the project, as shown in the table below reveals that 90.3% (253) of them are married, 8.6% (24) single, while 1.1 per cent (3) are divorced. Out of the 24 single males, 20 are renters, while the remaining are nonconsolidators.

Table 6-2: Marital status

Marital status	Frequency	
	No	%
Married	253	90.3
Single	24	8.6
Divorced	3	1.1
Total	280	100.0

Source: Field Survey January 1992

Table 6-3: Housing category by marital status

housing Category	Marital status of Household heads					
	Married		Single		Total	
	No	%	No	%	No	%
Renter	44	15.9	16	5.8	60	21.7
Owner	100	36.1	2	0.7	102	36.8
Nonconso- lidator	80	28.9	7	2.5	87	31.4
Dropout	28	10.1	-	-	28	10.1
Total	251	90.6	26	9.3	277	100

Chi-square = 23.63 Significance = 0.000 Cramer's V = 0.292

Source: Field survey 1992

Generally, there are more married than single respondents across all categories. Out of the 102 (36.6%) house owners interviewed 98% (100) are married while only 2% are single. Also, 80.5% of the renters are married, while only 19.5% single. Similarly, 92.0 per cent of the nonconsolidators are also married, while 8 per cent are single. However, it is important to note here that the renter group, forms the largest group in the single category, i.e. 65.6% (17) while house owner and nonconsolidators are only 7% (2) and 26.8% (7) respectively. The nonconsolidators, being the second largest group may imply that they are not consolidating because they do not have immediate needs for house. This is further supported by the fact that majority of those who gave this response, are single males without much family responsibility. Lack of any form of family commitments, means that there is no pressure to have a private place, and hence the reluctance to consolidate a plot even if the resources are available. Furthermore, most of the plots belonging to the single males might have been held for purely speculative purposes.

6.2.3 Household size (Number of people living in the house)

Table 6-4 : Household size

Household size	Frequency	
	No	%
1 person	25	9
2 - 4	40	14
5 - 7	108	38.7
8 & over	106	38.3
Total	279	100.0

Source: Field Study January 1992

The sizes of households appear to be generally on the large side in this project as shown in the table above. The table reveals that 76.7% of the households have 5 or more people, while only 14.3% have 2 to 4 people the remaining 9% are single males, mostly renters. The average household size of the beneficiaries is 7.1 people, well above the Bauchi average of 5.6 (Dar AL Handasah 1978), which is in itself large.

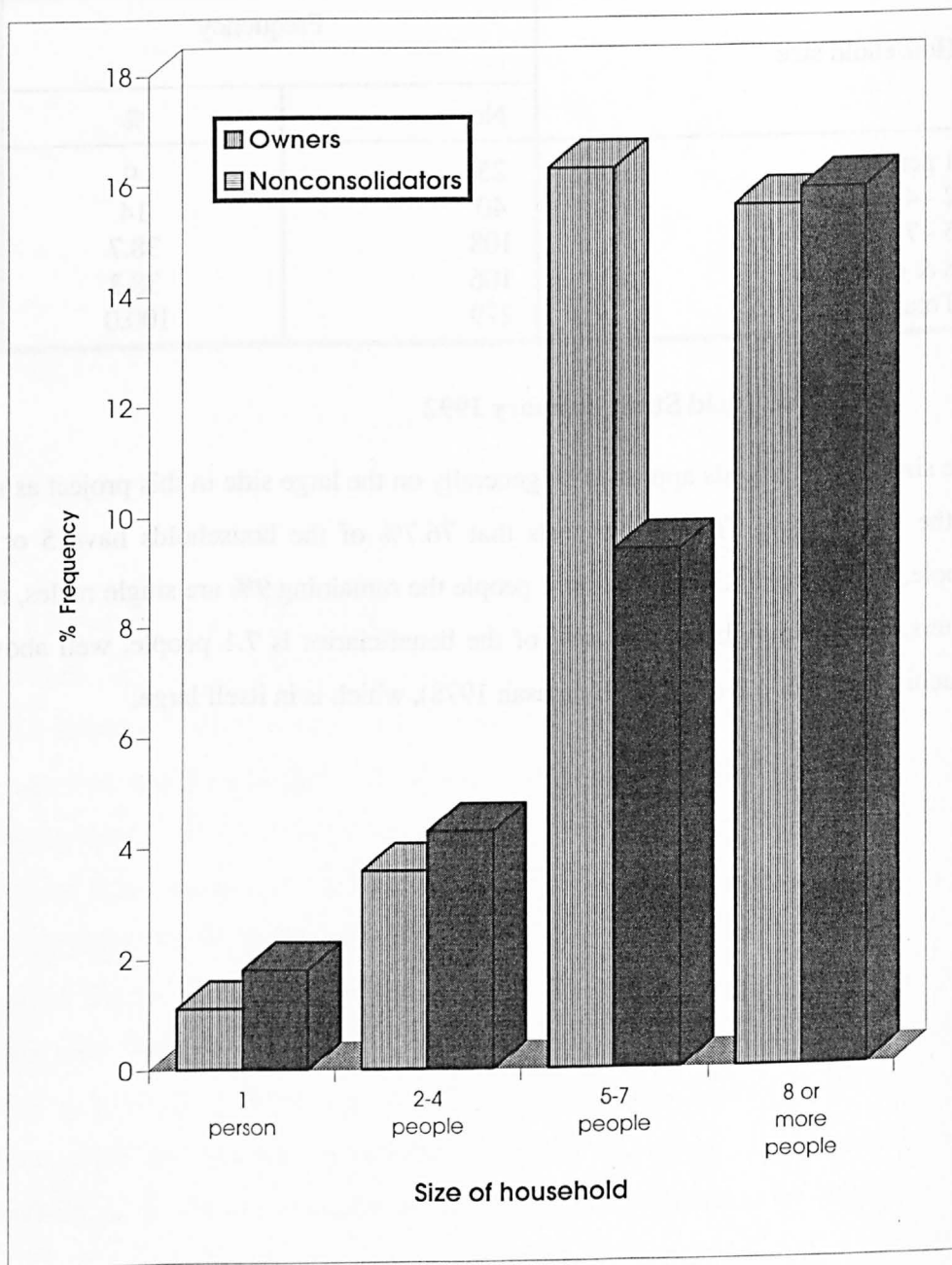


Fig 6.1 Household size by housing category

The tendency to have large households could be attributed to the polygamous nature of most households in Bauchi generally, and Makama in particular.

A further analysis was done by crosstabulation of the size of households and the housing status of respondents to see if there is an association between the two variables. The results are presented in the following table and illustrated by the fig. 6.1 on page 136

Table 6-5: Housing category by household size

Status	Household Size								
	One person.		2 - 4		5 - 7		8 & over		Total
	No	%	No	%	No	%	No	%	%
Renter	14	5.1	10	3.6	22	8.0	14	5.1	60 21.7
House Owner	3	1.1	10	3.6	45	16.3	43	15.6	101 36.6
Nconso- lidator	5	1.8	12	4.3	26	9.4	44	15.9	87 31.5
Dropout			6	2.2	16	5.8	6	2.29	28 10.1
Total	22	8.0	38	13.8	109	39.5	107	38.8	276 100

Chi-square = 40.74 significance = 0.000 Cramer's V =0.221

Source: Field survey March 1992

The statistics from the result of crosstabulating housing status (types of tenancy) and sizes of households show that there is an association between the two variables with a significance of 0.008 and Cramer's V of 0.221. The significance is more important in the differences between the renters of plots and the two other categories. This is because (as is revealed in the table), the renters of project houses tend to have smaller households while the house owners and nonconsolidators have larger. The size of

household does not directly help in this case to determine whether a plot allottee will be able to consolidate or not. However, from the findings (6.2.3) above, which show that the larger families who have bigger commitments are less likely to invest in housing, it can be inferred that the nonconsolidators, who have been found here to have large households, were unable to consolidate for the same reason.

6.2.4 Level of education

Table 6-6: level of education attained by household heads

Level of education	Frequency	
	No	%
No formal education	22	7.9
Primary school	53	18.9
Secondary school	62	22.1
College or University	143	51.1
Total	280	100.0

Source: Field Survey 1992

The levels of education of respondents in this project range from no formal education to graduate level as shown in the above table. Only 7.9% said they had no western education at all, 18.8% had primary education (spending 4 to 7 in school) and 22.1% had secondary education (up to 12 years of schooling) While 51.1 per cent had higher diplomas and degrees, as shown in the table above. Evidence from these findings shows that more than half of the respondents are well educated. The average number of years spent in full time education for the whole group is 12 years. It is not therefore surprising that most of them were found to have been employed in the civil service and private companies, as will be seen later in their types of occupation. However it is very important to note that education here was only used to refer to the western education with which beneficiaries could easily secure jobs with the government or private sector employers. Most beneficiaries had the Quranic education including those who had the western education. Some of those who had only the Quranic education were privately employed as teachers for charity, took very little, or no, pay and depended on charity for their livelihood.

Table 6-7: Housing category by level of education attained.

H. Status	Levels of education attained by Household heads				
	None	Primary	Secondary	Higher	Row Total
Renter	1 0.4%	9 3.3%	15 5.4%	35 12.7%	60 21.8%
Owner	1 0.4%	10 3.6%	20 7.2%	71 25.7%	102 36.2%
Noncon- solidator	19 7.6	25 9.1%	21 7.6	22 8.0	87 31.3%
Dropout	5 1.8	12 4.3%	6 2.2	4 1.4%	27 9.7%
Column Total	26 10.2%	56 20.3%	62 22.2%	132 47.8	267 100%

Chi-square =40.85 Significance = 0.0002 Cramers` V =0.231

Source: Field Survey, March 1992

The above results show that level of education is significantly associated with housing status. Education affects the ability to consolidate in a similar way, as shown in the findings of the earlier studies discussed above. The higher the level of education, the more stable paid jobs plot allottee will be able to secure, and the higher his income. If, on the other hand, the level of education is low, he will have to compete for unskilled jobs on low wages or engage in some form of unreliable petty trading.

6.2.5 Types of occupation

The main Occupation categories identified within the sample surveyed are, civil servants, farmers, businessmen, traders and artisans.

Farmers are those engaged in full or seasonal food or animal production as an occupation, while **civil servants**, are all those employed by the public sector in government ministries, parastatals and companies. **Business men and petty traders**,

are the self employed individuals in big or small-time businesses and trading. **Artisans** are the self employed small time repair men, roadside mechanics, providers of services like shoe shining, nail cutting, tailoring, domestic servants, watchmen and general labourers.

Table 6-8: Types of occupation

Types of occupation	Main Occupation		Secondary Occupation	
	No	%	No	%
Farming	8	2.9	76	43.2
Civil service	189	71.1		
Business and trading	47	16.0	100	56.8
Artisans	36	9.2		
Total	280	100.0	176	100.0

Source: Field Survey, March 1992

Analysis of the household heads interviewed, as shown in the table above, reveals that 71.1% (189) are employed in the civil services and 16.8% (47) are in business while only 2.9% are in full time farming activities. The remaining 9.2% (36) are artisans and petty traders. The civil servants are better represented in the project. This is probably because their incomes are more stable and easier to verify than those of business men or farmers, and also they are better educated, which makes them more able to understand fully the idea of the project right from the start.

It is interesting to also note that most respondents were engaged in more than one occupation. At least 62% of the civil servants said they had a secondary occupation to supplement their meagre incomes. As shown in the table above, 43.2% did seasonal farming while 56.8% were involved in part-time business. Some full time business men also engage in farming activities during the rainy season. A comparative analysis of the types of occupation is shown in the following tables.

Table 6-9: Types of occupation by Housing Category

Housing Category	Main Occupations of Household heads			
	Farmer	civil servant	trader or businessman	Total
Renter	6 2.2%	52 18.8%	2 0.7%	60 21.7%
House Owner	18 6.5%	78 28.2%	6 2.2%	102 36.8%
Nonconsolidator	29 10.5	45 16.2%	13 4.7	87 31.4
Dropout	5 1.8%	14 5.1%	9 3.2	28 10.1
Total	59 21.4	188 67.9%	30 10.7%	277 100%

Chi-square = 26.219 Significance = 0.003 Cramer's V = 0.217

Source: Field Survey: March 1992

There is an association between housing status and type of occupation, as revealed by the statistics above. Also it can be observed from the table that most of the house owners (28.2%) are civil servants, as compared to only 6.5% farmers and 2.2% traders. The nonconsolidators, on the other hand, form the largest group in both farming and trading categories. Petty traders and farmers in this town are generally on less stable and less certain incomes than civil servants. The civil servants, who are sure of a definite salary every month and can plan their expenditure ahead and will therefore be more likely to invest in their house building.

This is not to say that civil servants earn more, they do not necessarily. Traders could be earning more, in many cases, but because of the uncertainty of tomorrow's market, may not be willing to commit their money to housing. Furthermore, the requirements of proof of income and reliable (formal) employment to qualify for a Mortgage loan, also discriminated against the traders and farmers right from the beginning.

6.2.6 Income distribution

The income of the households is a very important factor in their ability to acquire a house, therefore the importance of an analysis of income cannot be overemphasised. For the purpose of this study however, an analysis of the income levels will be made, bearing in mind the income specified levels of the target beneficiaries. The income distribution of all beneficiaries is shown first, and a further analysis will show the distribution for the two different groups of the sample interviewed, i.e. the consolidators and the nonconsolidators.

Table: 6-10 Income distribution of the household heads

Income levels	Frequency	
	No	%
201 - 350	54	19.7
351 - 500	77	28.1
501 - 800	125	45.6
800 & over	18	6.6
Total	274	100.0

Source: Field Survey March 1992

As revealed by the above table, only the first two categories of income, representing 47.8% can be said to have fallen within the specified income (200-500 Naira) bracket of the target group. The largest category of beneficiaries is those earning 500 Naira and over representing 52.2%, which is well above the target income.

It is very important to note here that income distribution covered all those interviewed, including the project house renters, the house owner consolidator and the plot allottee nonconsolidators. When the income distribution was crosstabulated with the tenure categories, the result became even more disappointing, as shown in the table below. The comparative charts for levels of education, types of occupations and income distribution are in figures. 6.2, 6.3, and 6.4 respectively.

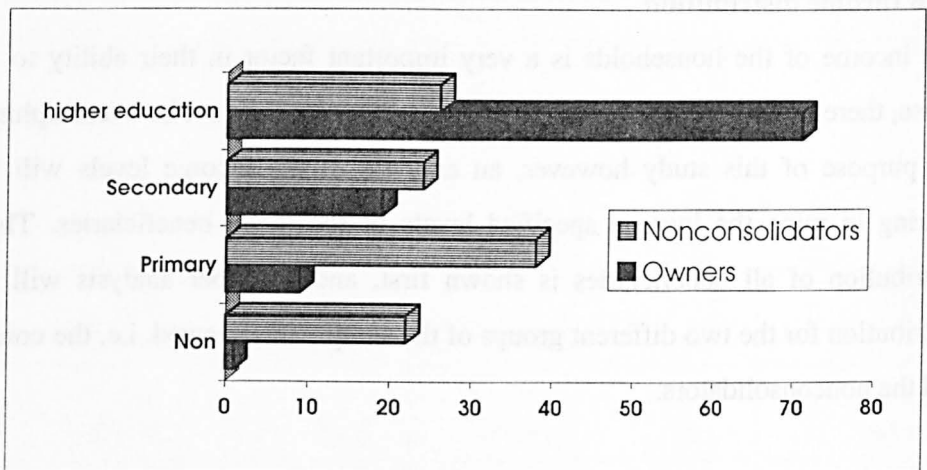


Fig 6.2 Level of education by housing category

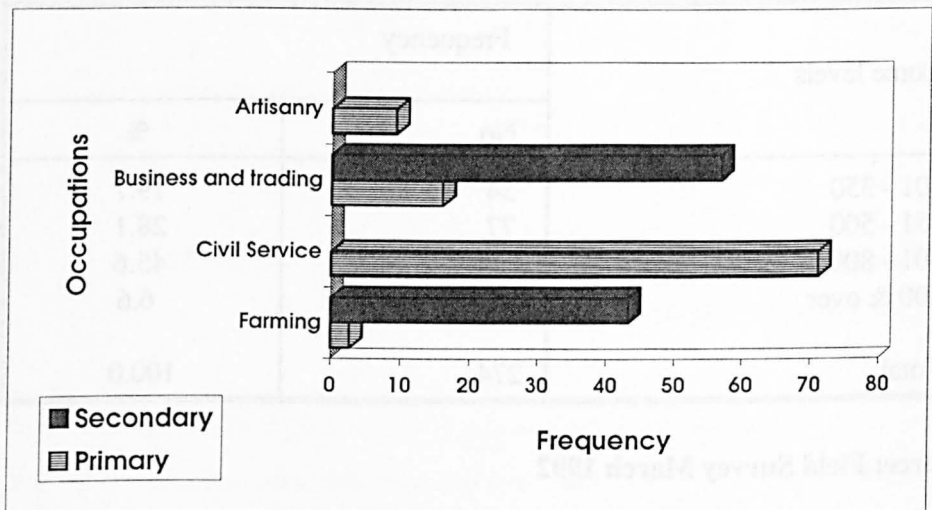


Fig 6.3 Types of Occupations by housing category

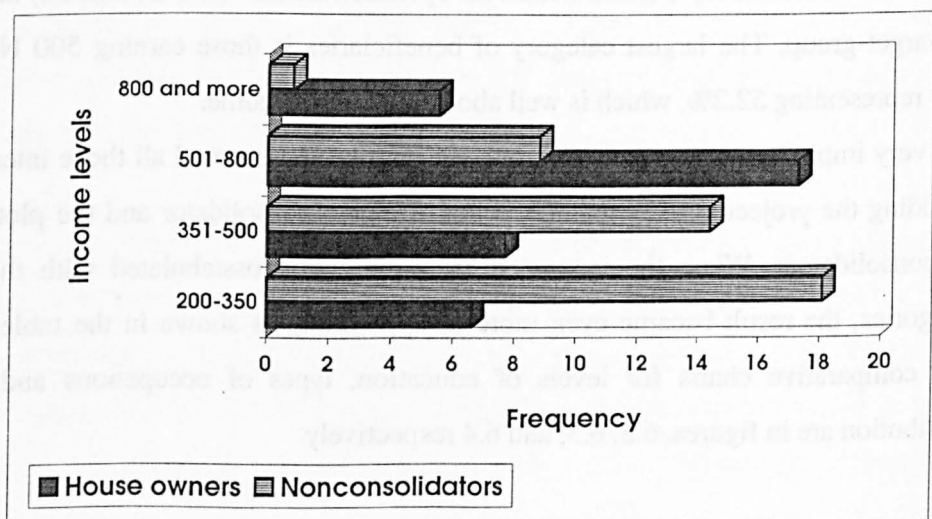


Fig 6.4 Income distribution by housing category

Table 6-11: Income distribution by housing category

Status	Income Levels				
	201-350	351-500	501-800	800+	Total
Renter	14 5.2%	25 9.2%	43 15.9%	1 0.4%	56 20.7%
house Owner	18 6.6%	21 7.7%	47 17.3%	15 5.5%	101 37.3%
Nonconso- lidator	29 10.7	35 12.9	22 8.1	1 0.4	87 32.1
Dropout	17 7.4%	4 1.5%	2 0.7%	1 0.4%	27 10.0%
Total	61 22.5%	81 29.9%	112 41.3%	17 6.3%	271 100%

Chi-square = 39.7 significance = 0.000 Cramer`s V = 0.270

Source: Field Survey, March 1992

The above statistics show that there is an association between the two variables with a significant level of 0.000 and Cramer`s V of 0.270. The table also shows that the majority of the nonconsolidators (23.6% out of 32.1%) appear to have come from the lowest income group, while the majority of the house owners (23.8% out of 37.3%) are from the highest income group. As for the renters, they are more or less spread through all income levels. A comparison of the average incomes of the households in the different groups by a t- test confirms this.

t-test for Income

Groups	No of Cases	Mean	T Value	Probability
Consolidators	102	714	2.23	0.001
Nonconsolidators	87	546		

Source: Field Survey, March 1992

The above result shows that the difference in the incomes of the two groups compared is statistically significant. The nonconsolidators had a lower average income than the house owners. This suggests that income affects consolidation positively. Those with more stable and higher paid jobs are more willing and able to invest in housing and therefore will readily consolidate given a security of tenure. This conclusion was arrived at after it was shown that income can be positively correlated to both levels of education and type of employment in this project.

6.3 Housing characteristics

The housing characteristics of the respondents to be analysed include the cost of housing and its quality for each category.

The consolidators' houses which are to be examined are the houses that they currently occupy in the project area. However, for the nonconsolidators, their current houses are outside the project. So firstly, characteristics are presented separately, and then the outcomes are compared for the two groups.

6.3.1 Quality of projects houses

The quality of housing is generally indicated by the types of materials used in their construction, the size of the house and the level of services available. The more permanent a building material, the higher the material quality associated with the particular house and vice versa. Another indicator for quality is the level of services available in the dwelling unit which include: the availability of electricity, and sources of water supply, as well as facilities like proper sanitation and waste disposal. Another indicator is the size of dwelling. A large and spacious dwelling with an adequate number of rooms will be regarded as high quality in terms of size, while on the other hand an overcrowded dwelling is of poorer quality.

6.3.1.1 Quality of building materials used

The quality of materials is considered both in terms of permanency, safety and aesthetics to some extent. The more permanent a material is the better its quality. For instance, cement blocks are considered better quality than mud bricks in terms of permanency.

So the types of materials used in the different parts of the houses in the project, were examined and represented in the following tables.

Table 6-12: Materials for foundations floors and walls.

Foundations, floors and walling materials	Frequency	
	No	%
A) Foundations		
Concrete mix (plain)	130	50.2
9" Concrete block	108	41.5
6" Concrete block	20	7.5
stones and crushed stones	2	0.8
Total	260	100.0
B) Flooring Materials	54	25.5
Concrete	116	54.7
Earth with cement screed	42	19.8
compacted earth		
Total	212	100.0
C) Walling materials		
Concrete blocks (9" & 6")	80	31.7
Concrete block (6" only)	156	61.9
Burnt clay bricks	14	5.6
Mud bricks	2	0.8
Total	252	100.0

Source: Field Survey March 1992

Half of the houses are of plain concrete foundations and another 41.5% of 9" concrete blocks, while only 8.3% are of weaker 6" hollow blocks or stones. Also the majority of the houses 80.3% have strong floors, while only 19.8% were found to be of ordinary earth. Note the widespread use of blocks for foundations, even though the project planners recommended only the use of plain concrete. Many builders said it was cheaper to use blocks, and they argued that the money saved from the foundations could be used on other parts of the building. The implication of this is that the use of weaker foundations may lead to collapse of buildings, risking lives and property. However, there is no evidence of this happening, as at the time this survey was conducted.

It was also found that 93.6% of the houses have concrete block walls, 5.6% of burnt bricks, while only 0.8% are of mud. The mud houses, it was gathered, are illegal and have been given a demolition order by the authorities.

Table 6-13: Roofing and finishing materials.

Roof types and finishes	Frequency	
	No	%
D) Roofing Materials		
Concrete	13	6.1
Timber roof with Asbestos cover	142	66.6
Timber roof with Corrugated iron	56	26.3
`Azara` with zinc/corrugated iron	2	0.9
Total	213	100.0
E) Types of finishes		
Plastered & painted, in & out	97	46.9
Plastered both ways but no paint	72	34.8
Unplastered and unpainted	38	18.3
Total	207	100.0

Source: Field Survey, March 1992

Most of the roofs (93%) are of timber with either asbestos or corrugated zinc cover. The use of asbestos was widespread especially by the early builders (between 1984 and 1987), because at a certain stage, the prices had dropped. This was probably as a result of the increased awareness by the consumers about the controversy over the dangerous material it contains.

Also, 81.7% of the walls were internally and externally rendered with cement plaster, and 60% of them were also painted fully and only 18.3% had neither plaster nor paint.

Table 6-14: Types of doors and windows used

Doors and Windows	Frequency	
	No	%
E) Types of doors		
Wooden doors in steel frames	100	48.3
Wooden doors in wooden frames	77	36.8
Corrugated iron on timber	23	10.9
Temporary cardboard cover	8	4.0
Total	208	100.0
F) Types of windows		
Aluminium & glass	4	2.0
Crittall Hope	36	17.3
Glass louvers	81	39.0
Locally made wooden louver	68	32.6
Temporary cardboard	19	9.1
Total	208	100.0

Source: Field Survey, March 1992

Most of the doors and windows are of high quality permanent materials. Only 4% of the doors were made of temporary cardboard and 10.9% of corrugated zinc on timber/"Azara". 36.8% are of wood in wooden frames locally made, and 48.3% are of wood in steel frames. Similarly, 58.3% of the windows are glass in steel frames while 32.6% are wooden and only 9.1% are of temporary materials. Note that glass louver windows are the most commonly used, though they are a security risk. This is probably because they are locally manufactured, prestigious, being glass, and reasonably priced in the market compared to other types of glass windows.

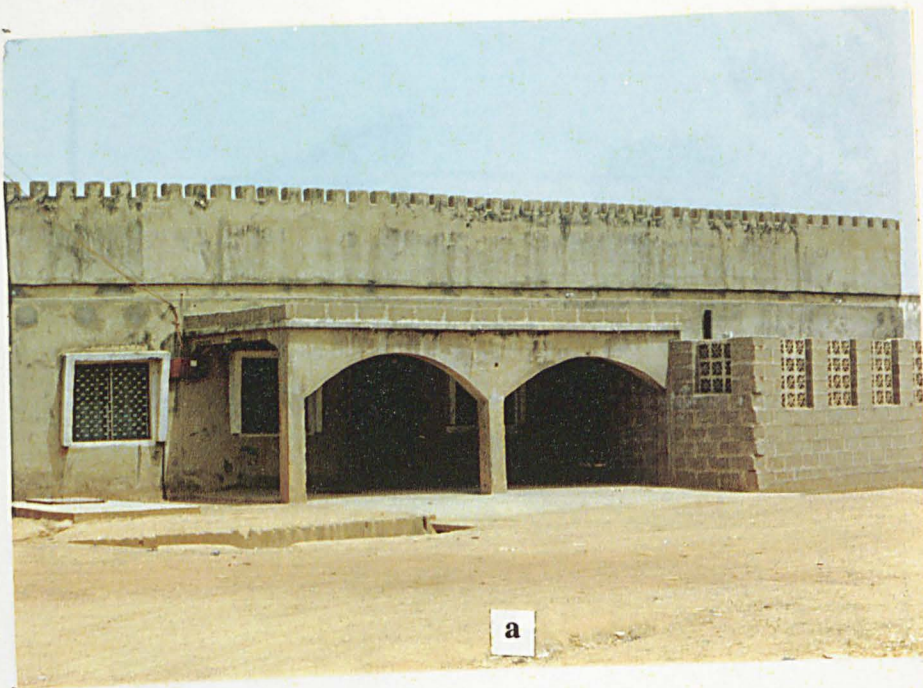
Generally, the project houses are large and of a high quality material. Some examples of the finished houses are shown in the following plates.



Plates 6.1 a&b: Examples of the high standard houses built on multiple plots

Each was built on three combined plots and belong to very wealthy families. Plate 'b', I understand belongs to a bank area manager and 'a', to the Former state commissioner of police. Note in the foreground of both plates the abandoned plots belonging to low income households who said they could not afford to build even the minimum basic unit.

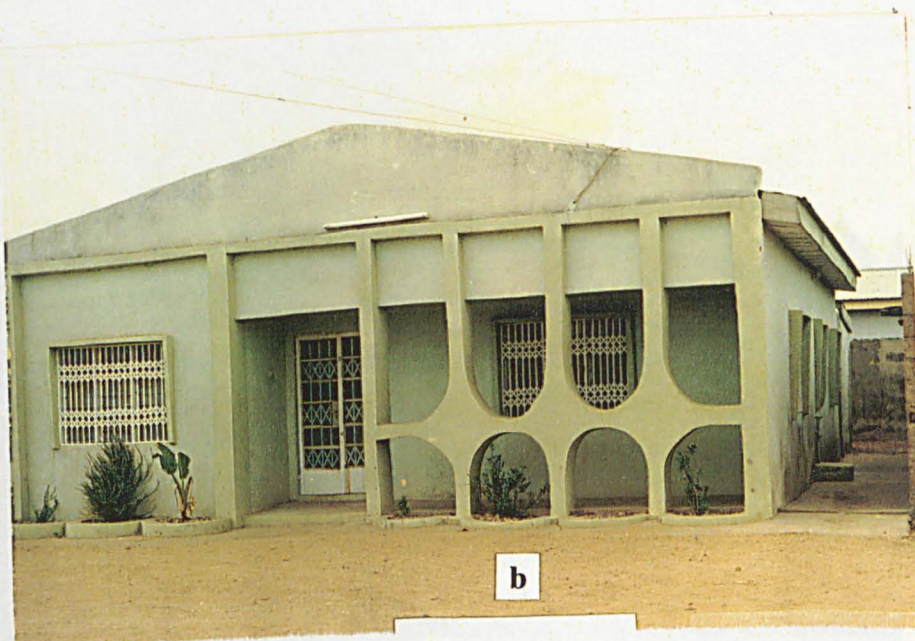




a

Plates 6.2 a&b : More examples of the high standard houses

a and b show more examples of the high standard housing which belong to high income non-target group members. They are also built on multiple plots and are of 6 and 7 bedrooms respectively.



b



Plates 6.3 a&b : More examples of expensive houses built on multiple plots.

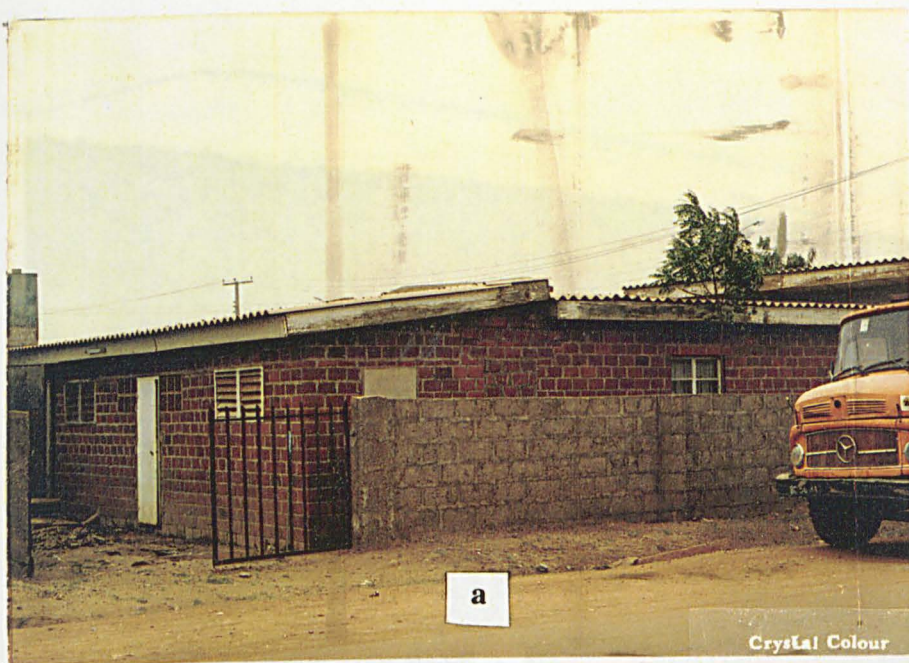




Plates 6.4 a&b examples of rented housing units in Makama Project

Typical examples of the rented type of houses in the project area. They are built on multiple plots and belong to absentee landlords. The landlords, I understand, own several properties in the town. Tenants are mostly single people or couples without children. The majority tend to be bank staff of various levels from manager down to cashiers and messengers.

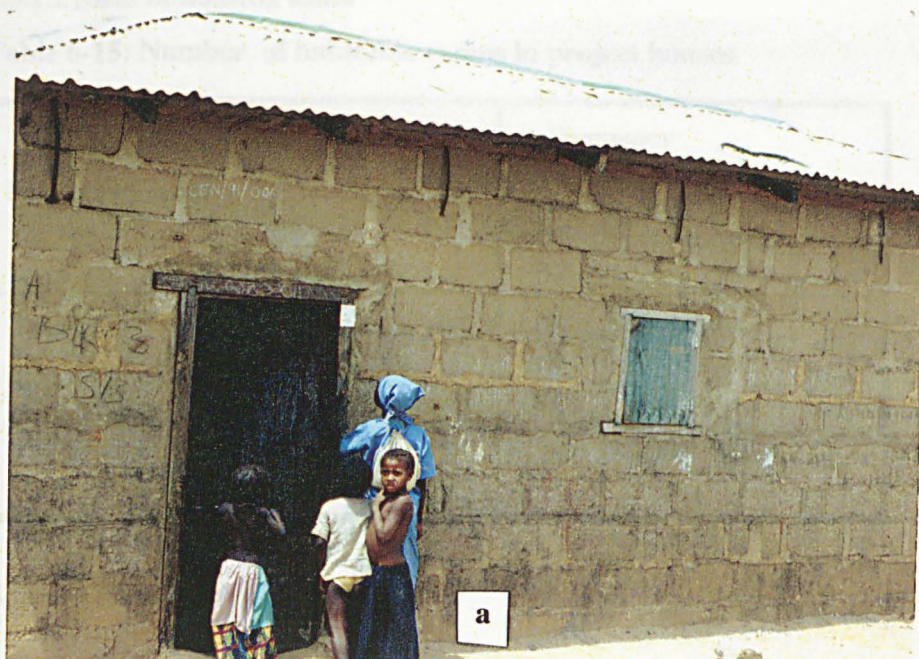




Plates 6.5 a & b : Project demonstration unit

It is built with burnt red bricks and has four bedrooms and a sitting room. It is fenced all round and has a drive parking space. The completed house has already been sold to a top government official.





Plates 6.6 a&b : Examples of the type of housing units built by legitimate target groups

The house in Plate a is finished and occupied. The block at the front is the entrance hall (Zaure) and the master bedroom. The core unit area was used to build three rooms for the family members, while both kitchen and toilet are the open air type. The plot area is marked partly by the back of the buildings and partly by connecting walls. The house was built in 1985/86.



6.3.1.2 Sizes of housing units

Table 6-15: Number of habitable rooms in project houses

Number of rooms	Frequency	
	No	%
1 - 3 rooms	32	19.7
4 - 6 rooms	98	60.1
7 rooms and over	33	20.2
Total	163	100.0

Source: Field Survey March 1992

Most of the houses, as shown by the table above, are large in terms of number of rooms available. 80.3% have more than the three habitable rooms, including kitchen. Only 19.7% have three rooms or less, and the mean number of rooms is 4.9. These figures suggest large house sizes well above the basic unit (2 rooms). When asked why they needed to build many rooms, most pointed to the needs of their large extended families. It is interesting to note that only 32.7% of the house owners said they moved into a basic unit and later expanded as the project recommended, but the majority, 67.3%, said they built houses which were complete enough to take all their family members, before moving to site. Despite the large houses, the occupancy rate in the project 3.2 is still higher than the Makama average of 2.6. The plot sizes also limit the size of the dwellings. For this project, three different sizes were predetermined by the project planners. The small size being 200 metres square and the largest 300 meter square while the medium is 260 metres square. Though not many beneficiaries complained directly about the sizes of the plots, as a major problem, it was obvious that most of them maximised the available space and hardly left any for circulation. When asked about space, many expressed the desire for more space on their plots. Though the plots could take so many rooms, there was not enough space left for other things like courtyard, and fencing walls with which the beneficiaries are most familiar in their former houses.

6.3.1.3 Availability of services and sanitary facilities

One of the major objectives of this project is to increase access to basic services like good sources of water supply, electricity and good sanitation by the low income groups. It is therefore expected that the availability of these facilities in the project area will be far better than in other low income settlements. When this was investigated, the results in the following tables were obtained.

Table 6-16: Availability of electricity

Electricity and sources of water	Frequency	
	No	%
Electricity		
Yes	144	88.1
No	19	11.9
Total	165	100.0
Sources of water		
Private tap	46	27.9
Private well	97	59.5
Public pump	17	10.5
Water seller	3	2.1
Total	165	100.0

Source: Field Survey March, 1992.

The survey reveals that 88.1% of the houses are connected to electricity, and of these, 28.4% also had a water supply from their private taps, while 59.5% had private wells. Only 2.1% bought their water from a water seller and 10.5% used the communal pumps. The level of services here is a great improvement over other low income settlements where beneficiaries lived, and where nonconsolidators are still living, as reported by most beneficiaries (91%).

Though the pipe born water supplies still remain low in the project, it is better served than the average area of the Bauchi town.

Table 6-17: The types of Toilets

Type of toilet facility	Frequency	
	No	%
Traditional pit	54	33.1
Ventilated Improved pit	47	28.8
Water system	62	38.1
Total	163	100.0

Source: Field Survey, March 1992

The level of sanitation has also improved for most households over what they had in their former housing. Thus 28.8% are now using ventilated improved pit latrines (V.I.P) while only 33.1% are still using the traditional pits, and 38.1% have a water system (WC with septic tanks). In most houses (90%), the minimum distances (10m) between wells and pit latrines are maintained, which is a very good health precaution.

Table 6-18: Availability of bathroom and kitchen

Availability of bathroom & kitchen	Bathroom		Kitchen	
	No	%	No	%
Private	110	68.0	122	74.3
Shared	37	22.3	38	23.3
None	16	9.7	4	2.4
Total	163	100.0	164	100.0

Source: Field Survey, March 1992

In the project houses, most households (68.0%) have exclusive use of a bathroom, while 22.3% share and only 2.4% wash in the open.

Also 74.3% have the exclusive use of a kitchen, while 23.3% share and only 2.4% cook in the open.

6.3.1.4 Drainage and solid waste disposal

An observation of the area reveals that proper drainage is virtually non-existent. The rain water drains started by the project remain uncompleted and are being used as rubbish dumps by some residents. When asked about drainage facilities, 90.3% of the respondents said they had none and only 9.7% said they had. Rain water runs freely and finds its level, while waste water from the kitchens and bathrooms is allowed to drain to the open backyards forming breeding grounds for flies and mosquitoes and creating a health hazard to residents.

Table 6-19: Methods of solid waste disposal

Solid waste disposal method	Frequency	
	No	%
Collected by the Authorities	22	13.3
Dumping on an empty plot or in an unfinished house.	96	58.5
Burning in the bush	46	28.2
Total	164	100.0

Source: Field study, January 1992

Proper facilities for solid waste disposal were also absent at the time the survey was conducted. When asked how they dispose of their solid waste, the above responses were given. Most of the households (58.5%) said they threw it onto an empty plot or uncompleted building nearby while 28.2% burn in the backyard, and only 13.3% said they have an organised collection system. A brief discussion on this matter with the older residents of the project revealed that waste collection bins were provided in the early stages of the project, but they disappeared and were never replaced. Also the vehicles provided for waste collection by the authorities were never maintained properly and have long ceased to function.

6.3.1.5 Cost of houses (recurrent expenditure on housing)

The cost of houses in the project refers to the running costs of built project houses. This includes the monthly building loan repayments (cost of land, land development, project

mortgage loans and private borrowing), and the user service charges (water rates and electricity charges). The following table reveals the approximate amounts most of the house owners said they were spending on housing per month.

Table 6-20: Cost of Housing

Cost of housing (In Naira)	Frequency	
	No	%
00 - 40	12	16.0
41 - 60	28	37.3
61 - 90	22	29.3
91 - 120	5	6.7
over 120	8	10.7
Total	75	100.0

Source: Field Survey March 1992

As can be seen in the table, the majority (53.3%) of house owners interviewed, spent less than 60 Naira on housing, 29.3% spent between 61-90 Naira and only 17.4% paid more than 90 Naira. Rough estimates show that the majority did not spend 20% of their earnings on housing particularly those in the upper margin of the low income, i.e. those earning between 350 and 500 Naira per month. These figures appear to be low compared to the cost of housing outside the project.

It is anticipated that the quality of the project houses will be better than houses outside the project for the same category of income. The next section examines the quality of houses currently occupied by the nonconsolidating category, for the purpose of comparison.

6.3.2 Characteristics of nonconsolidators' housing

The above results showing housing characteristics concern only the houses built in the project, some of which are occupied by just a fraction of the intended beneficiaries. However, a larger proportion of the intended beneficiaries, who were allocated plots and

could not consolidate, are living outside the project area. This section investigates the quality of their housing while trying to compare it with that of the consolidators, to find out whether they are better or worse of.

6.3.2.1 Types of housing tenements

Table : 6-21 Type of tenement in current housing

Type of housing	Frequency	
	No	%
Owner occupied house	48	41.0
Rented house	65	55.6
Government low-cost house	2	1.7
Family house	2	1.7
Total	88	100.0

Source: Field Survey January 1992

It is clear, from the above table, that the majority of nonconsolidators (55.6%) are renters of the houses they live in. Only 41.0% said they lived in their own houses, while 1.7% lived in government low-cost houses, and the remaining 1.7% shared their family houses. The renters pay a good percentage of their income towards rent, the amount ranges between 35 and 250 Naira per month, as shown in the table below. The cost of rent is directly proportionate to the level of services provided, number of rooms rented as well as the quality of materials used to build the house.

Table 6-22 Cost of houses rented by the nonconsolidators

Monthly rent (in Naira)	Frequency	
	No	%
00 - 40	9	13.4
41 - 80	38	56.7
81 - 120	17	25.4
over 120	3	4.5
Total	67	100.0

Source: Field Survey March 1992

It is therefore not surprising that the majority, (86.6%) pay over 40 Naira toward their rents monthly. Only very few (13.4%) said they pay less than 40 Naira, in these cases for only one room in a shared compound. Those who rented more than one room paid in multiples of 40 or less depending on the quality of the house and level of services provided. It was shown that 65% of them are actually renting more than one room, because of the need for their large families, and had to pay higher rents. When this is added to the mortgage commitments, which some of them have, it raises the total cost of their housing higher and makes things difficult for them. It is not surprising therefore that many of them complained bitterly about the financial difficulties they are facing.

6.3.2.2 Quality of building materials

Table 6-23: Nature of building materials

Type of housing	Frequency	
	No	%
Temporary	31	27.2
Semi-permanent	29	25.4
A mixture of temporary and permanent	48	42.1
All permanent materials	6	5.3
Total	114	100.0

Source: Field Survey March 1992

Table 6-23 above shows that presently, the majority of nonconsolidators live in houses built of locally available materials. More than half (52.6%) of them are of temporary or semi-permanent materials, walls are of mud plastered and painted both internally and externally. Foundations are mostly of stones and broken blocks. Only 42.5% were of a mixture of permanent and temporary materials. Walls were usually of either concrete blocks or burnt bricks, while roofs are of azara/timber and corrugated iron covers, with

some windows and doors temporary. Most houses, however, did not have ceilings. Note that only 5.3% of the houses are made of all permanent materials.

6.3.2.3 Size of dwellings

When the size of the dwellings of the nonconsolidators, (measured by the number of rooms for their exclusive use) was investigated, the results reveal that nearly half (44.6%) of the nonconsolidator lived in two rooms or less. Another 39.3% lived in three and four rooms, while only 16.1 per cent lived in over 5 roomed houses as shown in the table below. Most of those living in one room or two also complained of space problems, overcrowding and lack of privacy. Those living in rented compounds also had to share toilets and kitchens with other tenants.

Table 6-24: Number of rooms in nonconsolidators' houses.

Number of rooms	Frequency	
	No	%
2 or less	50	44.6
3 - 4	44	39.3
5 - 7	12	10.7
Over 7	6	5.4
Total	112	100.0

Source: Field Survey, March 1992

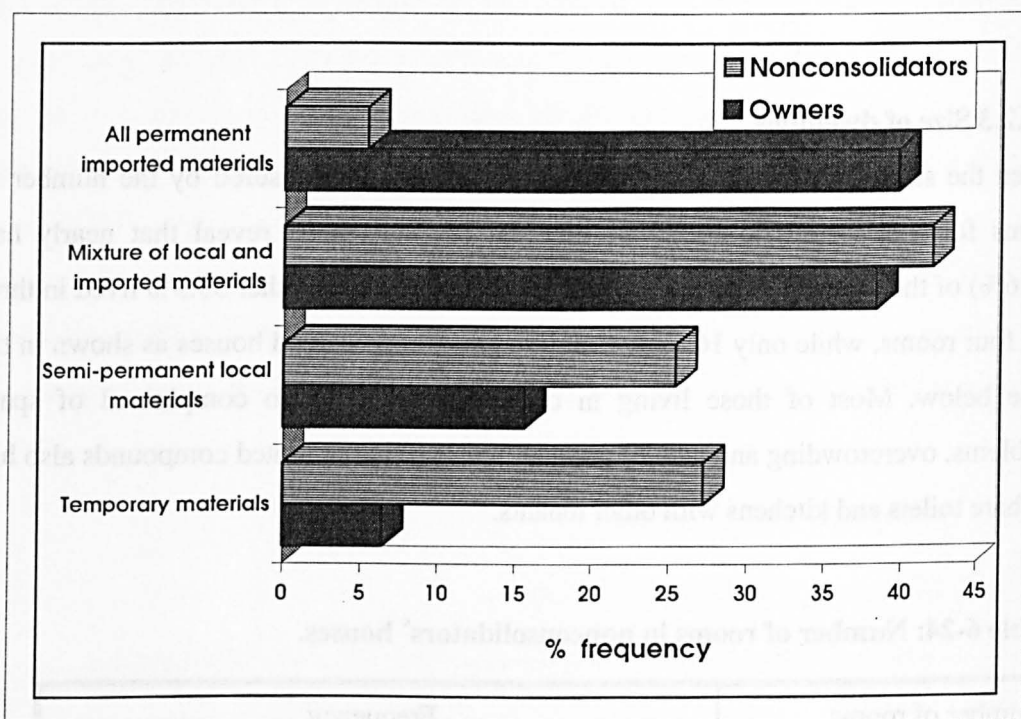


Fig 6.5 Nature of building materials by housing category

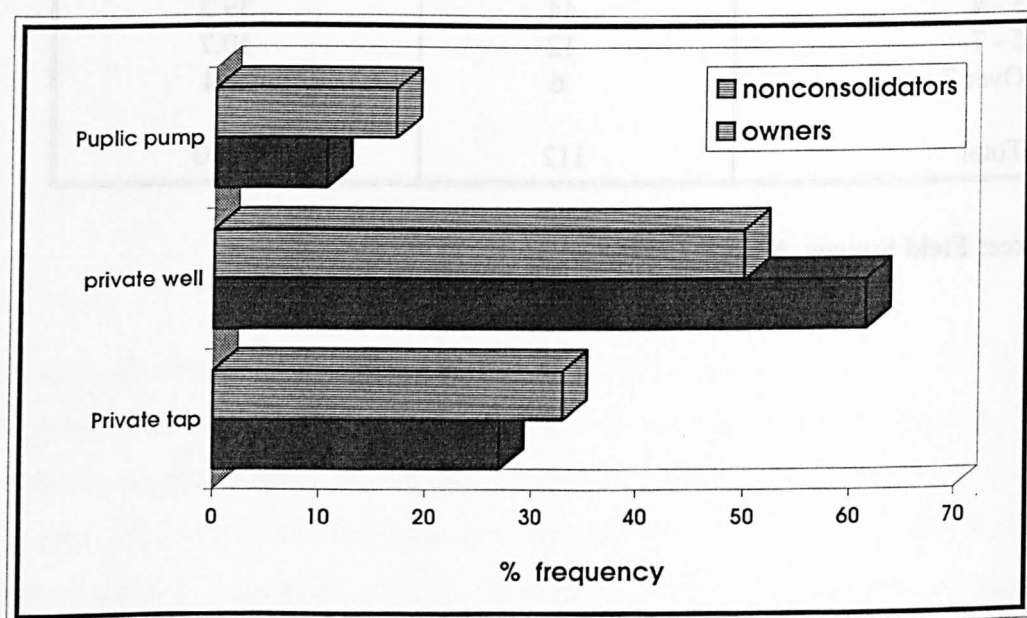


Fig 6.6 Sources of water supply by housing category

6.3.2.4 Level of services and sanitation

Table 6-25: Availability of water supply, electricity and good sanitation

Electricity, Water and Sanitation	Frequency	
	No	%
i. Availability of electricity		
Yes	73	83.0
No	15	17.0
ii. Source of water supply		
Private tap	29	33.0
Private well	44	50.0
Water seller	15	17.0
iii. Sanitation type		
Traditional pit latrine	44	50.0
Ventilated Improved Pit	31	35.2
Water system (septic tanks)	13	14.8

Source: Field survey March 1992

Table 6-25 above shows that although the majority are served with electricity, provision of pipe water appears to be a problem. The major source is private wells which are found in most homes. It is important to note that most of these wells are seasonal and dry up when the rainy season is gone. So for a good part of the year, they do not provide enough water for the households.

The major type of toilets used are traditional pit latrines which are often shallow and are filled up in a short time necessitating digging another. Another problem associated with this type of toilet is contamination of well water. If a minimum distance (of usually 10m) is not maintained between the pit and a well, seepage may occur, thereby contaminating the water.

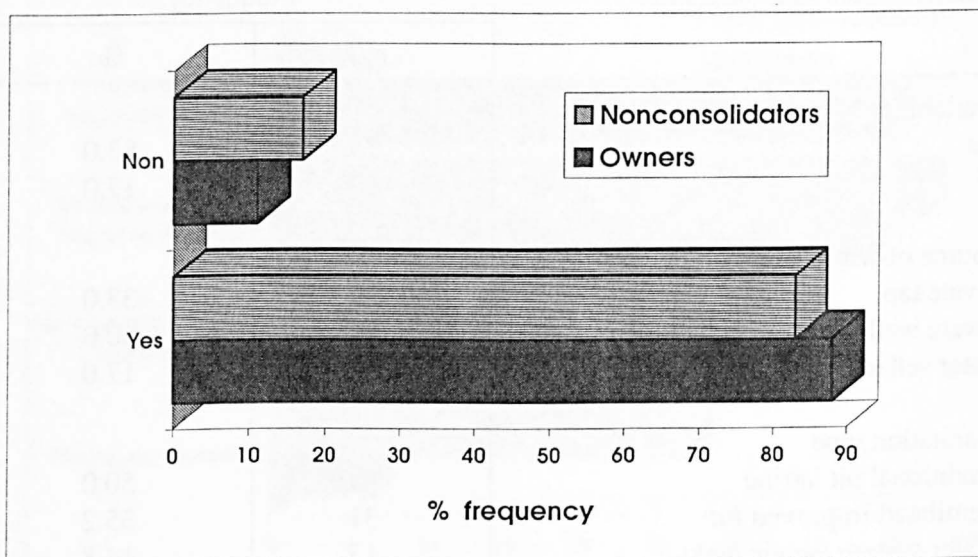


Fig 6.7 Availability of electricity by housing category

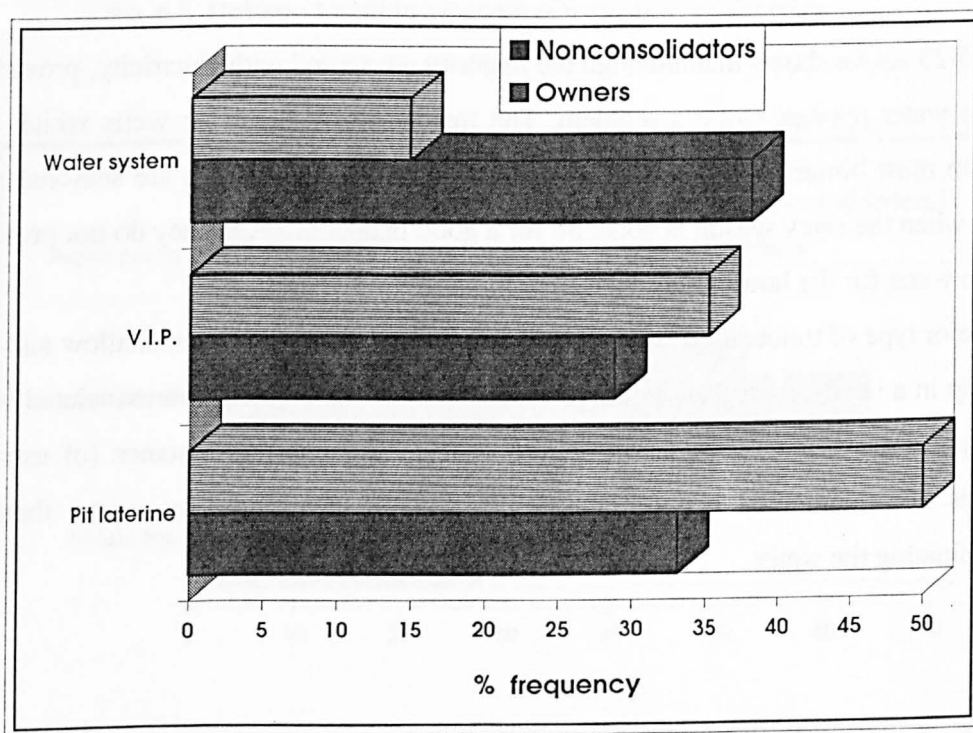


Fig 6.8 Types of sanitary facilities by housing category

6.3.3 Housing category by housing quality: a comparative analysis.

In the section above, we have seen the results of the investigation of the housing characteristics for each of the categories of respondents.

A comparison of two of the categories of households (consolidators and nonconsolidators) is presented below. The main elements compared are the quality of building materials, the level of services available and the sizes of the dwellings measured by number of rooms, source of water supply and types of sanitation. The comparison of these elements is presented in Figures 6.7 and 6.8 opposite.

The charts reveal that the nonconsolidators have less access to good sources of drinking water, electricity and proper sanitary facilities. It is important to note that although most of them also lived in houses built of temporary and semi-permanent materials, they did not seem to mind that as much as their lack of access to basic services.

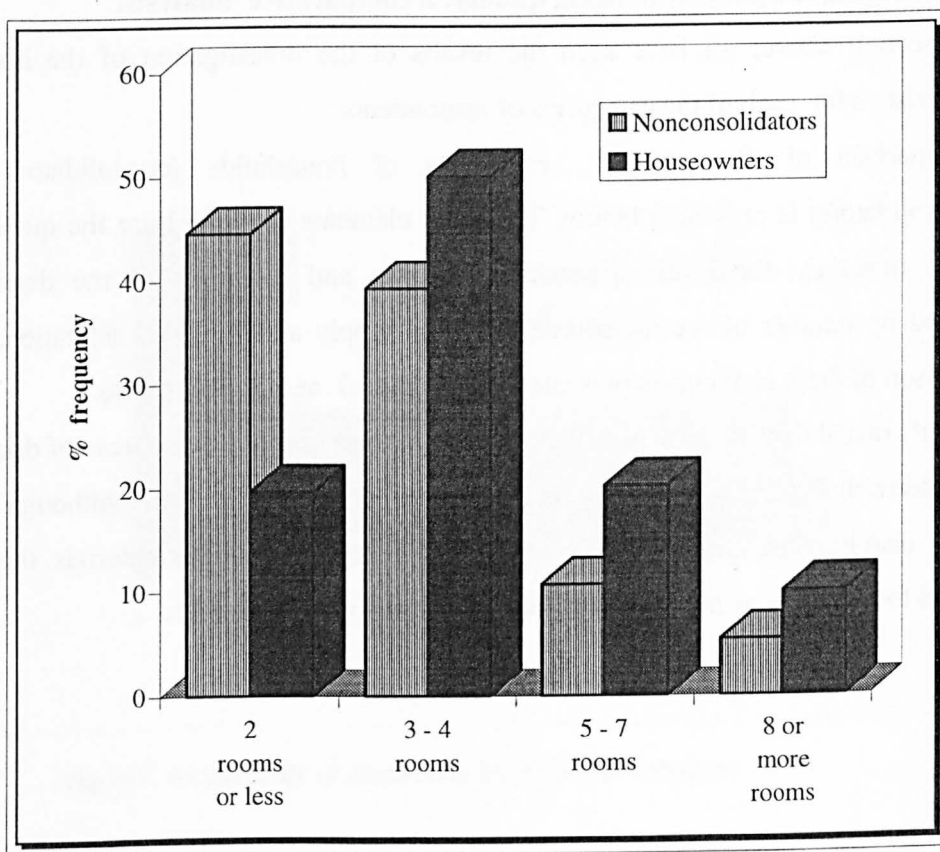


Fig 6.9 Number of rooms by housing category

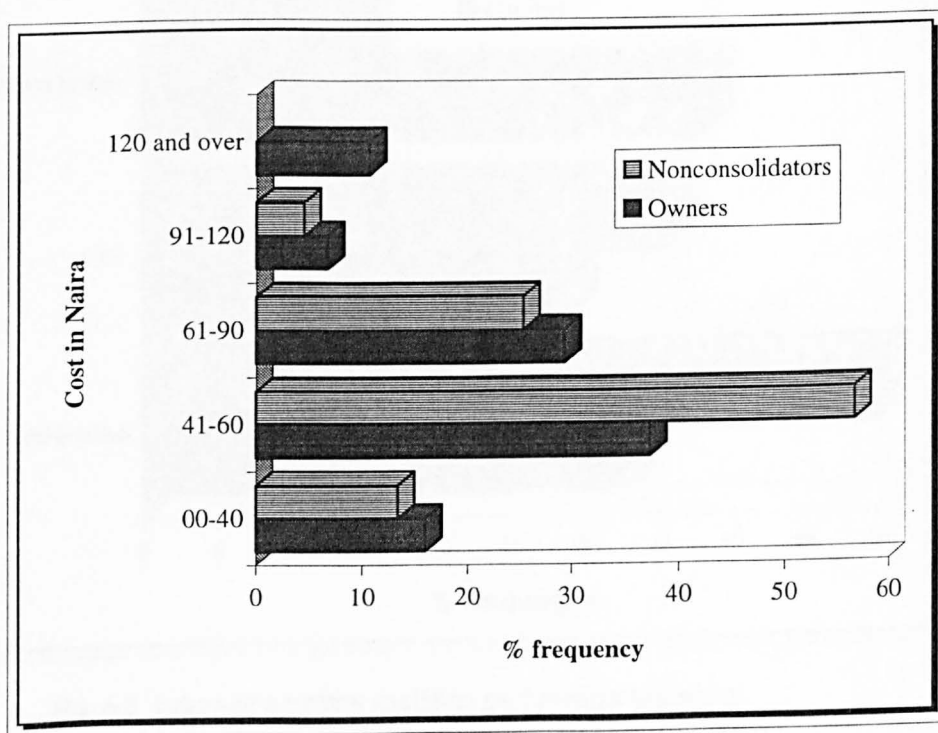


Fig 6.10 Cost of housing by housing category

The comparison for the number of rooms and the cost of housing is done by a t-test and presented in tables 7.26 & 7.27 below.(See also figs. 6.9 & 6.10)

Table 6-26: t-test for the number of rooms

Groups	No of Cases	Mean	t Value	Probability
Consolidators	102	5.06	3.73	0.001
Nonconsolidators	78	3.42		

The mean number of rooms for the consolidators is also higher than those for the nonconsolidators with a probability of 0.001. As we have seen in the earlier analysis, the house owners mostly built rooms to suit their needs while the nonconsolidators, most of who where still renting, could not rent as many rooms even though they required them. The cost of renting was just too high for them. Most of them shared the compound with other renters. It is not surprising that more than 50% of them complained of a lack of sufficient space as one of the major problems they faced in their current housing.

Table 6-27: t-test for cost of housing

Groups	No of Cases	Mean	T Value	Probability
Consolidators	52	76.82	2.50	0.014
Nonconsolidators	88	108.11		

The cost of housing here refers to the amount of money spent on housing by the respondents each month. For the consolidators, the amount of mortgage repayment was used, while the cost of rent plus the mortgage (where applicable) was used for the nonconsolidators.

The mean monthly cost of housing for the nonconsolidators (108.1)was found to be significantly higher than for the consolidators (76.8) with a very low probability of 0.014. This is not surprising because as we have seen earlier, most of the

nonconsolidators said they were paying high rents as well as mortgage repayment while their houses remained uncompleted.

It is clear from the above comparison that the housing situation of the nonconsolidators was worse both in terms of quality and cost. They have less access to basic services like a good source of water supply, electricity and proper sanitation. Though they do not seem particularly worse off in terms of quality of materials of their houses, it is important to note that most of them are renting, while the consolidators own the houses themselves. This means that facilities like kitchens and bathrooms are being shared, while the house owners have exclusive use of these facilities.

The houses in the project also have more rooms than the average houses in the area. In addition, the owners of the houses have security of tenure and more peace of mind than those who are not able to consolidate their plots and are still renting. The nonconsolidators were mostly complaining of economic hardships that they have experienced from having to pay rents, as well as a mortgage on their unfinished houses. The house owners on the other hand, have only to worry about the mortgage repayments, the maximum of which is less than the average rents paid by an average low income family in the area. These findings therefore lead to the rejection of the hypothesis that there is no difference between the quality of housing for the two groups.

6.3.4 Access to community facilities

A detailed analysis of the access to community facilities by the two groups was not undertaken, however, informal discussions with individual households suggest that their access to schools for their children and medical care has greatly improved, particularly in terms of travel distances to the facilities.

Five schools and five health clinics were provided by the project in the Makama area. This means that mothers can walk to the nearest clinic with sick babies in a few minutes and at no travelling cost. This will lead to greatly improved clinic attendance and increased care.

Some families expressed their worries about the prohibitive cost of treatment in the health clinics provided. However this is the same throughout the town and the project's objective was only to provide the facilities and not subsidise the cost of using them.

On the other hand, in the non-project area, access to medical clinics and schools is still a problem. Some children still travel up to two kilometres to the nearest school. Many people still pay a great deal for transportation to and from the nearest health clinics. This discourages attendance at both schools and hospitals.

6.4 Summary and conclusion

The above findings have helped to demonstrate that the nonconsolidators are economically weaker, have less stable jobs and generally earn less than the consolidators. The findings also show that, as a consequence of their lack of consolidation, their housing situation is worse. They pay higher rents and have less access to basic services and community facilities. Those who have successfully consolidated are already reaping the benefits of better access to services and community facilities. They also have only the monthly mortgage instalments to pay while the nonconsolidators were found to be also paying rents where they currently lived in addition to this. Many of them have complained about the economic hardship this is causing them. The serious consequences of this problem for the affected groups suggest, the need for an immediate solution. To this effect, the causes of the problems were investigated and the findings presented in the next chapter (7) as the specific findings of the study.

Chapter 7: Hypothesis Tests Results

7.0 Introduction

The previous chapter (6) was on the general survey findings where the results of the comparative analysis of the socio-economic and housing characteristics of the sample were presented. This chapter is therefore on the specific findings of the hypothesis tests, where the findings on each test are presented and discussed. It is in three sections; the first section presents the findings on the lack of affordability for the cost of building basic a unit with project specified building materials. These findings include the prices of the project specified building materials, prices of alternative materials, sufficiency of project loans, access to other sources of borrowing, availability of savings and the, methods of construction used and cost of hired labour. The second section is on the size of the basic unit, including findings on the number of rooms specified by planners and the number needed by target beneficiaries. The last section summarises the findings and draws conclusions.

7.1 Findings on the lack of affordability for the cost of building a basic unit

There are two different types of cost involved in consolidation, the capital and the current costs. The capital cost, include, the cost of land, building materials and labour for construction, while the current costs, are the mortgage repayments, charges and rates. Full running or current costs usually begin to apply when the house owner has consolidated his plot and occupied it, So they are less relevant to this study. This study is more interested in the cost involved during the process of consolidation, which is the capital cost.

7.1.1 T-test For the cost of building a basic unit

It was hypothesised that the actual cost (in Naira) of building a basic unit is significantly greater than that which the target group can afford. This was tested by a t-test and presented below. The null hypothesis is that there is no difference between the two costs.

Table 7-1: T-test for the cost of building a basic unit

Groups	Mean(in Naira)	t-value	significance
Group A	6 829	+4.96	0.01
group B	4 185		

Source: Field Survey March 1992

The result of the t-test shows that the difference between the two means is statistically significant at 0.01 level. Therefore the null hypothesis that there is no difference is rejected.

A further investigation, achieved by asking the target group why they could not consolidate, revealed supporting evidence for this finding, as shown by the following table.

Table 7-2: Reasons for lack of consolidation

Reasons for lack of consolidation	Number	%
High cost of building to the required standards	96	84.1
Lack of access to a project loan	14	12.2
Dislike for the basic unit concept	5	4.7
Total	115	100.0

Source: Field Survey March 1994

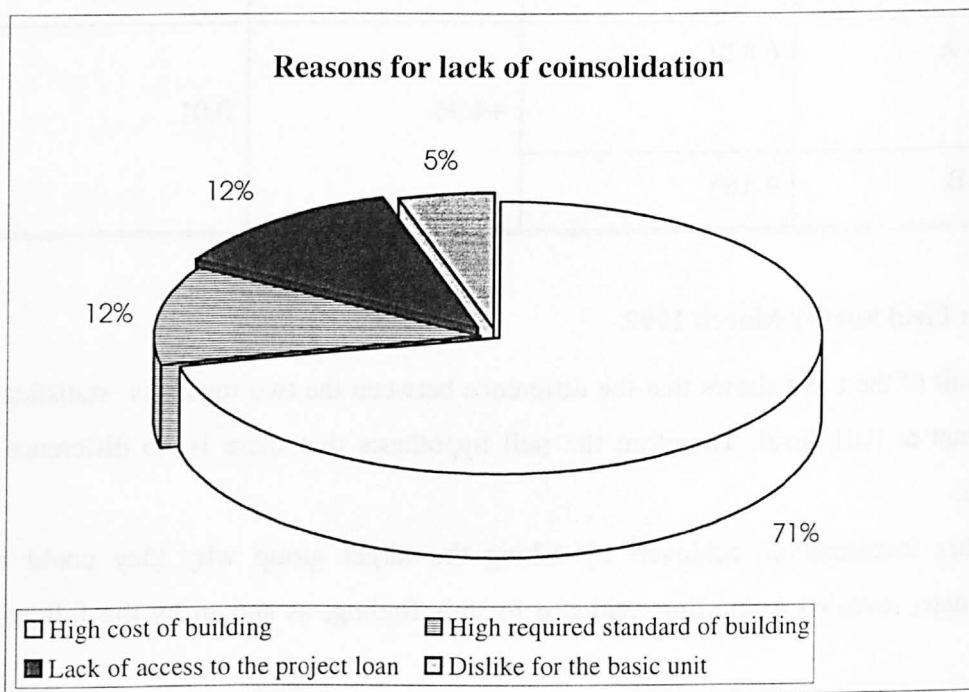


Fig 7.1 Reasons for lack of consolidation

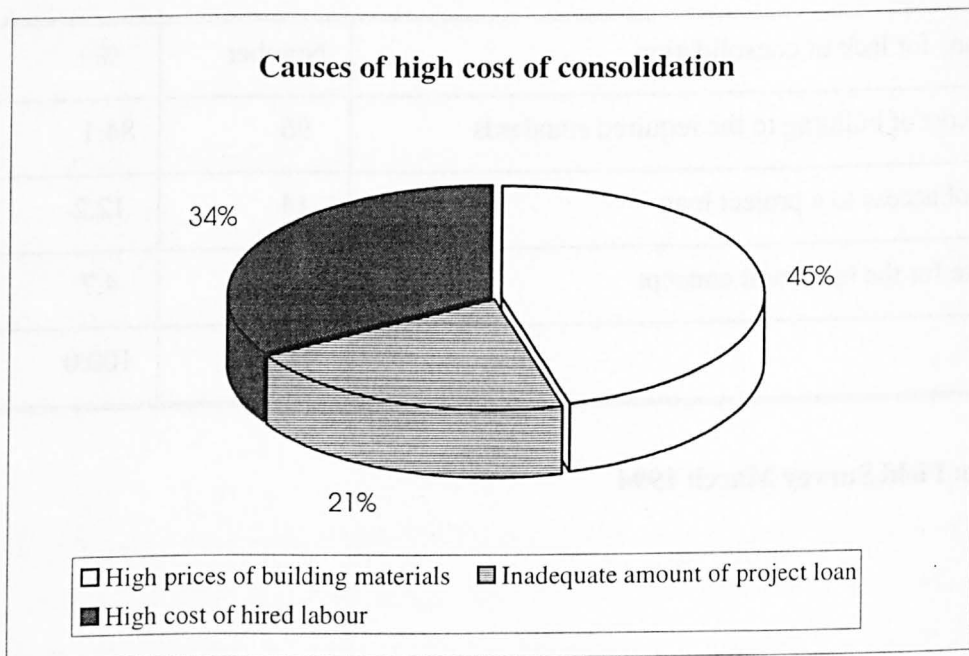


Fig 7.2 Causes of high cost of consolidation

It is clear from the above table that, the majority of the affected group attribute their problem to the cost of building. This response represents 84.1% of the reasons given. Other reasons, which include lack of access to a project loan and dislike for the basic unit concept, represent 12.7% 4.7% respectively. Note that only 4.7% said their dislike for the basic unit concept was the cause of their problem. Though this does not seem to be a significant proportion, observations of the common practices of this group, presented in a later section, reveal interesting findings.

For this project and the purpose of this study, the cost of land, building materials, and labour constitutes the total cost of building a basic unit. The prices of each of these components directly affect the overall cost of the consolidation.

When the nonconsolidators were asked why the cost of consolidation was high, the following results were obtained.

Table 7-3: Causes of high cost of construction

Causes of high cost of building	Number	%
High prices of required building materials	37	45.8
Inadequate amount of project loan	18	20.6
High cost of hired labour	28	33.6
total	83	100.0

Source: Field Survey March 1992

As shown in the table above, high prices of building materials represented 45.8% of the causes given. A further 33.6% said it was due to high cost of labour, while the remaining 20.6 per cent said it was due to the small size of loan they were given by the project authorities.

Each of these factors is discussed in the following subsections. They are discussed in more details to identify their specific roles.

7.1.2 High prices of required building materials

This is the most important cost factor given by the respondents. A market survey of some selected materials, which include the required ones, has shown that prices are not only high, but keep rising over the years. Fig. 7.3 opposite illustrates the percentage rises of the materials over the years.

Table 7-4: Prices of building materials by year.

Type of materials	Unit of measure	Prices by year (in Naira)			
		1978	1985	1988	1991
Cement	Bag	7.50	10.00	25.00	73.00
Sand	T/load	10.00	18.00	50.00	135.00
Gravel	T/load	40.00	55.00	280.00	900.00
Asbestos roof cover	4"x8"sheet	3.00	2.50	4.50	80.00
Corr.Zinc	S/Sheet	2.30	4.50	16.00	95.00
Asbestos ceiling	S/Sheet	2.83	6.00	13.00	30.00
Hardboard ceiling	S/Sheet	3.30	8.00	28.00	120.00
Ready made flush door	Each leaf	N/A	11.00	95.00	250.00
Steel door frame	Each	N/A	20.00	70.00	90.00
Nails	13.2kg pk.	9.60	10.00	150.00	250.00
Oil paint	4l.gallon	8.00	12.00	95.00	100.00
Emulsion paint	4l.gallon	6.50	16.00	42.00	80.00
Timber	Piece	6.50	10.00	30.00	40.00
9" concrete blocks	Each	0.45	0.69	3.50	5.00
6"concrete blocks	Each	0.25	0.40	2.50	4.00
Burnt clay bricks	Each	0.25	0.30	2.50	3.50
Mud bricks	Each	0.05	0.12	0.25	0.45

Source: Market survey March 1992.

The materials required are; concrete, concrete blocks or burnt bricks and timber roofs with corrugated iron covers. It is important to note that, at the initial stages of project planning, it was proposed that low income beneficiaries be allowed to use mud for building their walls as long as their foundations were of solid concrete. This idea was later dropped and the use of mud was banned. So all plot allottees had to use the required materials for foundations walls and roofs, or not build at all. The few who attempted to use mud were stopped and given a demolition order. The prices of the required materials, which are cement, concrete blocks and their components, as are shown by the table below were far too high and have been shown to have been rising more quickly than the local traditional materials which most beneficiaries can comfortably afford. Take cement blocks for example, in 1978, when the project was planned, they cost 45 kobo each, while mud bricks only cost 5 kobo. This means that building a unit with mud walls would have meant up to 90% savings on the cost of walling, all other things being equal.

The prices of these materials kept rising at an alarming rate over the period of project implementation. The percentage rises in the prices of some of the selected materials which are most commonly used are shown in the table below, and graphically represented in fig 7.3

The graph compares the percentage increase in prices of building materials between two periods; 1) the project planning and initial implementation period, between 1978 and 1985 and 2) the period when most house construction took place, between 1985 and 1992.

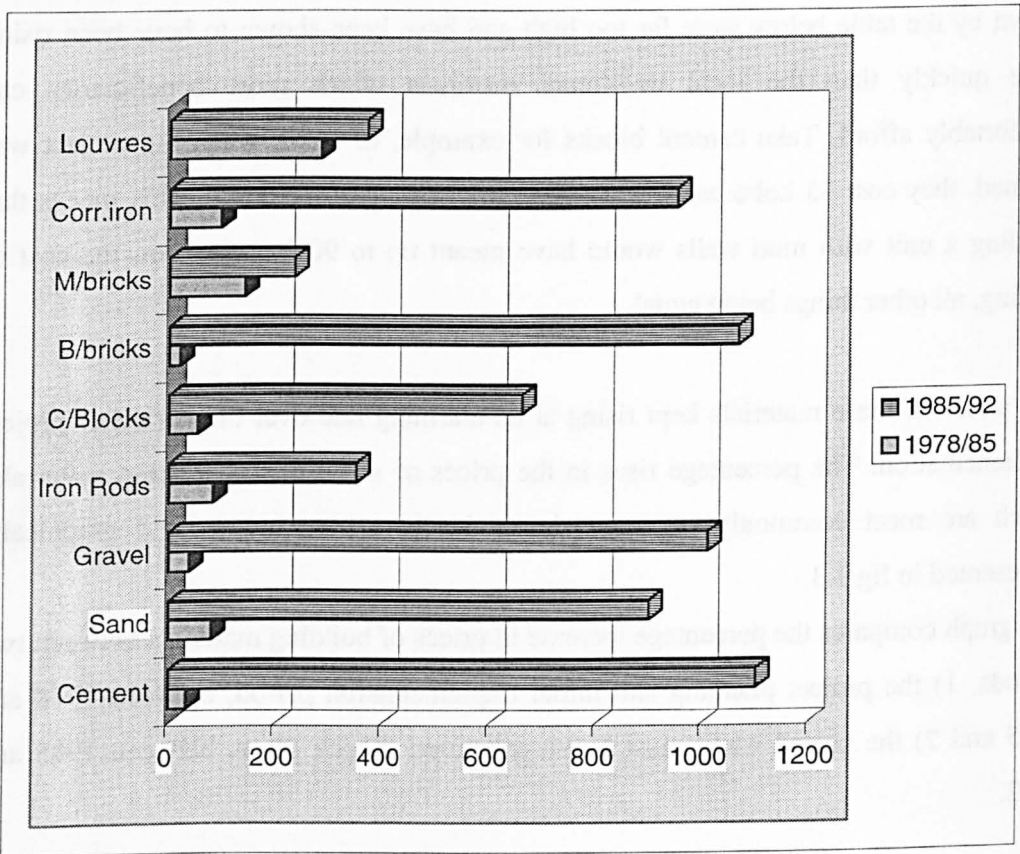


Fig 7.3 : Percentage rise in prices of selected building materials

Table 7.5 percentage rise in prices of selected building materials

Building material	Unit	Price and percentage increase by year (in Naira)				
		1978	1985	% rise	1992	% rise
Cement	per bag	7.50	10.00	33	120	1100
Sand	t/load	10.00	18.00	80	162	900
Gravel	t/load	40.00	55.00	38	555	1010
Iron Rods 1/4"x30	per ton	429.00	781.00	82	3,516	350
Conc. Blocks 9"	each	.45	.69	53	5.00	659
Burnt Bricks 6"	each	.25	.30	20	3.50	1066
Mud Bricks	Each	.05	.12	140	.40	233
Corr. iron Sheets	per sheet	2.30	4.50	95	42.70	950
Louvers 36"x6"	each	1.10	4.20	281	15.50	369

Source: Field Survey March 1992

When asked whether the local building materials were affordable to them, the majority said they were, as shown in the table below.

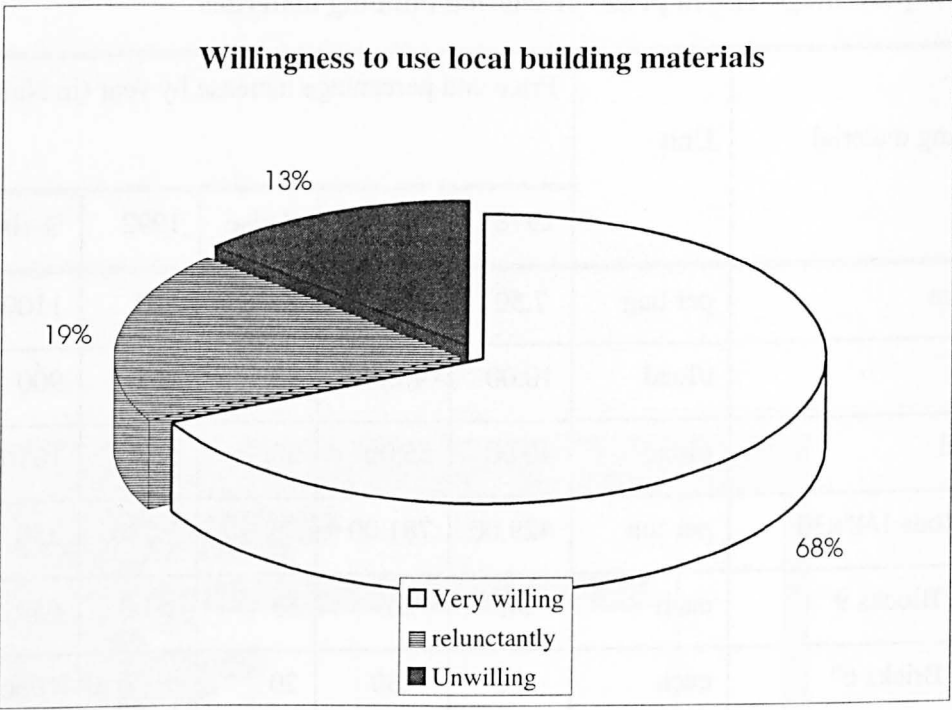


Fig 7.4 Willingness to use local traditional building materials

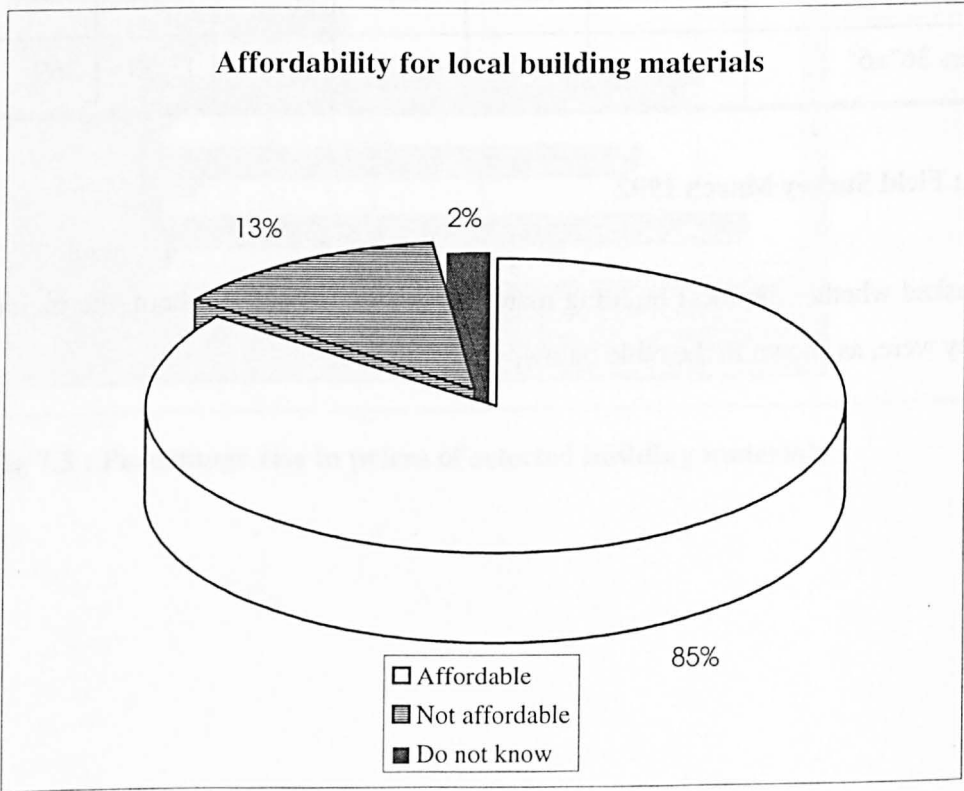


Fig 7.5 Affiordability for the local building materials

Table: 7-6 Affordability for Local Building materials

Affordability for local Building materials	Frequency	
	No	%
Affordable	98	85.2
Not affordable	17	14.8
Total	115	100.0

Source: Field Survey, March 1992

They were also asked if they were willing to use the said materials, if they were allowed to do so, the responses vary slightly as follows.

Table: 7-7 Willingness to use local materials

Willingness to use local building materials.	Frequency	
	No	%
Very willing	78	67.8
Reluctant	22	19.2
Unwilling	15	13.0
Total	115	100.0

Source: Field Survey, March 1992

As shown by table 7-5 above, 85.2% said they could afford to build with the local traditional building materials while only 14.8% could not. However, if allowed to use them, 67.8% said they were willing to do so, and only 32.2% were either reluctant or totally unwilling.

A further analysis was done to compare the estimated cost of building a basic unit with the required materials and with local traditional materials. The results of the analysis, as

indicated in the following table, show a very large gap between the two costs, all other things being equal.

Table 7-8: Estimated cost of a basic unit by year

Year of building	1978	1985	1988	1992
With local materials	1,235	2,047	3,582	7,164
With required materials	3,400	6,400	12,000	22,000
Amount of savings	2,165	4,353	8418	14,836

Source: Field Survey March 1992

Note from the table, that it is the prices of these required materials that have been rising at a very dramatic rate over the last decade. This is also reflected in the rising cost of building the units. Although the rise is also observed in the prices of the local materials, it is more subtle.

The local building materials used for this estimate are the commonly used in Bauchi town. The materials are foundations of stones, mud brick walls, 'azara' and corrugated iron roofing, mostly no ceilings and locally made wooden doors and windows. The price of labour in this case is very little. Most traditional houses are either self-built or built by local master builders whose labour is generally cheap in northern Nigeria.

The building materials required by the project authorities on the other hand, are the high priced ones (especially cement, concrete, timber and corrugated iron sheets).

The estimated cost of building the unit (with both the local and required materials) was arrived at by using standard quantity surveyors' rates for the year. The rates include the cost of all work done including site development, materials used and labour. Data for the cost of the different components for the different years could not be obtained at the time of the survey. This was due to poor record keeping and lack of proper recollection by majority of builders regarding the cost. It was therefore no possible to break down the cost components.

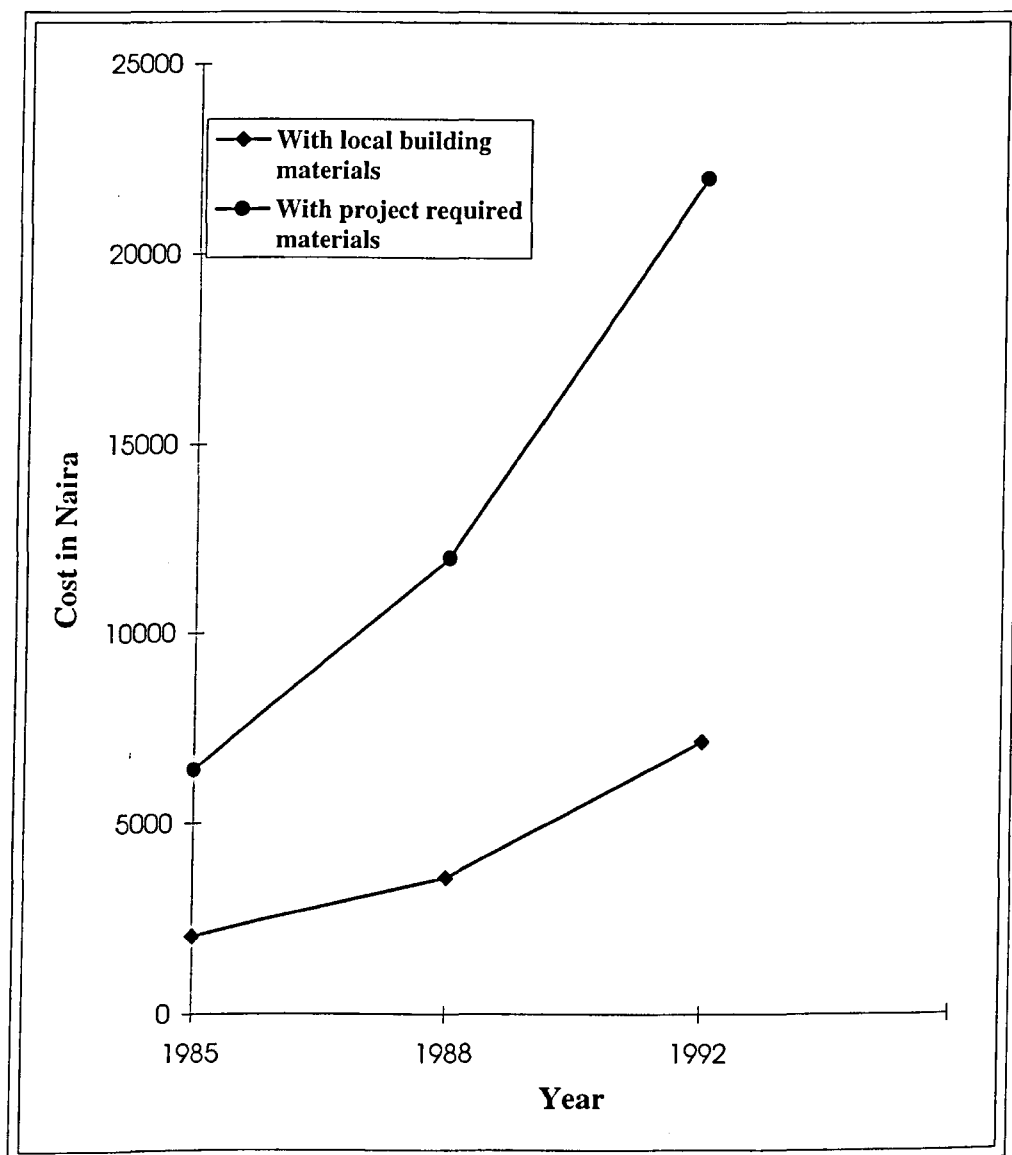


Fig 7.6 Estimate cost of building a basic unit by the type of materials used

These findings bring two questions to mind. Firstly, why have these prices risen so high? and secondly why does the authority insist on the more expensive materials.

Many factors are responsible for the rising cost of building materials in Nigeria over the last decade. Some of the leading factors include inflation (see Appendix fig.1), devaluation of the national currency (see Appendix fig.2), scarcity of materials resulting from underproduction of industries and the dubious activities of some distributors and agents.

Rising rates of inflation in the developing countries has become a major problem in recent years, it pushes up the prices of all goods including building materials. In Nigeria, however, the rates have been subtle and bearable until the 1980s when the government embarked on the Structural Adjustment Program (SAP) with the pretext of reforming the economy. This program (SAP) involved many things including the devaluation of the Naira (the national currency), a ban on importation of many goods including building materials, and a lot more. The implications of this to the building industry are that, the ban on importation of building materials means a scarcity of them since the country can not produce enough to cater for its need. Also devaluation of the currency means that more Nairas are needed to purchase the important components and machinery needed to produce building materials at home.

Both the high cost of production and scarcity of building materials result in high prices to the consumers.

The situation is made even worse by the activities of the agents dealing in building materials, distributors make the situation even worse. The materials sometimes pass through four different hands before finally reaching the consumer, and in each case, prices are pushed up high to maximise profit. Also the agents sometimes create a state of artificial scarcity by hoarding the materials to push prices up. It could be recalled during this survey, in March 1992, the government decided to lift the ban on importation of cement to ease acute shortage in the country. Accordingly, when the cement poured in,

the prices fell to less than half of what they were before the ban was lifted. However, a few days later all the cement in the markets in most cities disappeared into warehouses where they were hoarded. The prices went up again sabotaging the government's efforts. This is made even worse if the materials are being transported from a different part of the country, for example from the South to the North. The added cost of transportation is also transferred to the consumer.

Note that even the prices of locally produced burnt bricks rose. This is because the burnt bricks' industries also use imported technology for production. So that there was a situation where a block of burnt brick cost almost as much as a concrete block made from imported cement. It is not surprising therefore that most houses in the project were of concrete blocks, because builders thought this gave better value for almost the same cost. This is despite the fact that the demonstration unit in the project was built with burnt bricks. Similarly all the materials popularly used in most parts of the construction have risen quickly in price in the same manner as cement and its products.

Secondly, why do authorities make it mandatory to use certain type of building materials? They often do, with the argument about ensuring health and safety of residents in the buildings. Although, this argument may be strong in cases where materials like thatch is used, which could quickly spread fire and risk to lives of occupant, in other cases, however, it is weaker. Mud, for instance, is of no known health or safety hazards to the house owners. Mud houses have stood for decades without collapsing. The insistence on the use of high priced materials, may have more to do with the professional prejudices against the local cheaper ones and their desire to have control over decisions.

7.1.3 Size of project loan and its adequacy

Although only 20.6% gave this as the cause of their lack of affordability for building, about 81.9% of the surveyed sample agreed that the loan was grossly inadequate.

The amount was not sufficient to pay for the price of land, labour and materials they needed to build their houses. The following is a breakdown for the size of loans (in Naira) made available according to the size of plot allocated.

Table 7-9: Total loan less development charge

Plot size	Total loan	Plot cost	Balance	% Balance
Small subsidised (AS)	3,200	978.65	2221.35	67.41
Small (A)	3,200	978.65	2221.35	67.41
Medium (B)	4,500	1414.50	3085.50	68.56
Big (C)	6,000	2232.50	3767.50	62.00

Source: Field Survey, March 1992

The above table shows not only that the amount of loan given was small, but also more than 30% of the loan was used to pay for the cost of serviced plots allocated. Although the amount of loan was later increased, that was only a drop in the ocean compared to the magnitude of the problems discussed above.

When the amount of loan is compared to the cost of building a basic unit alone, the extent of the gap becomes clearer. (See fig.7.7.)

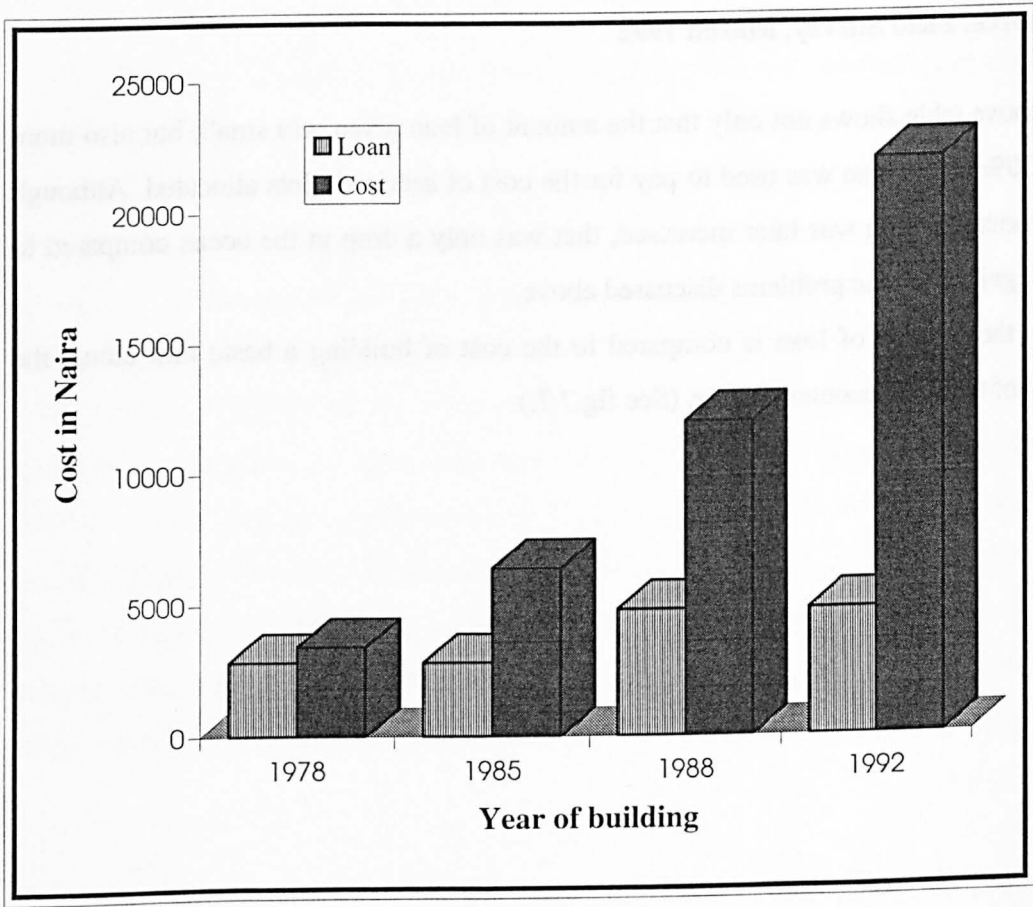


Fig 7.7 The gap between the cost of building and the amount of loan

**Table 7-10 Gap between amount of loan available and
the estimated cost of building a basic unit**

Year	Av. amount of loan (in Naira)	Estimated cost of a basic unit (in Naira)
1978	2,824	3,400
1985	2,824	6,400
1988	4,824	12,000
1992	4,824	22,000

Source: Field Survey March 1992

The beneficiaries, including those who have fully consolidated were asked about the sufficiency of the loan. A majority of 81.9% said it was not sufficient and only 18.1% said it was. When the owners of the consolidated houses were asked where they got the extra funding, 65.7% said it was from their private savings while the rest (34.3%) said they borrowed from relatives or friends.

This implies that not only the project loan was insufficient, but there were no other formal sources of housing loan accessible to the beneficiaries. Those who did not have private savings or friends to borrow from, simply could not afford to consolidate, which has been found to be the case with majority of the nonconsolidators.

When the nonconsolidators were asked about availability of savings and other sources for borrowing money, the following responses were obtained.

7.1.4 Availability of savings and non-project borrowing sources

Table 7.11 : Availability of savings and non-project borrowing sources

Availability of savings	Number	%
None	71	81.6
Yes	16	18.4
Total	87	100.0
Sources of non-project borrowing	Number	%
None	54	62.0
Friend/relatives	20	23.0
Community Saving group (Adashe`)	13	15.0
Total	87	100

Source: Field Survey March 1992

The majority of the respondents (81.6%) said they had none. The few who said they did have, received help from relatives and friends and community saving arrangements. Hardly any had access to non project formal borrowing like commercial banks. Many said their applications were turned down for lack of secure collateral.

It is also important to note here that the project loan did not achieve full coverage of the all plot allottees. Many beneficiaries (21%) said they did not secure the loan at all. More than half (53%) of them said they could not satisfy the stricter conditions imposed later by the Federal Mortgage Bank.

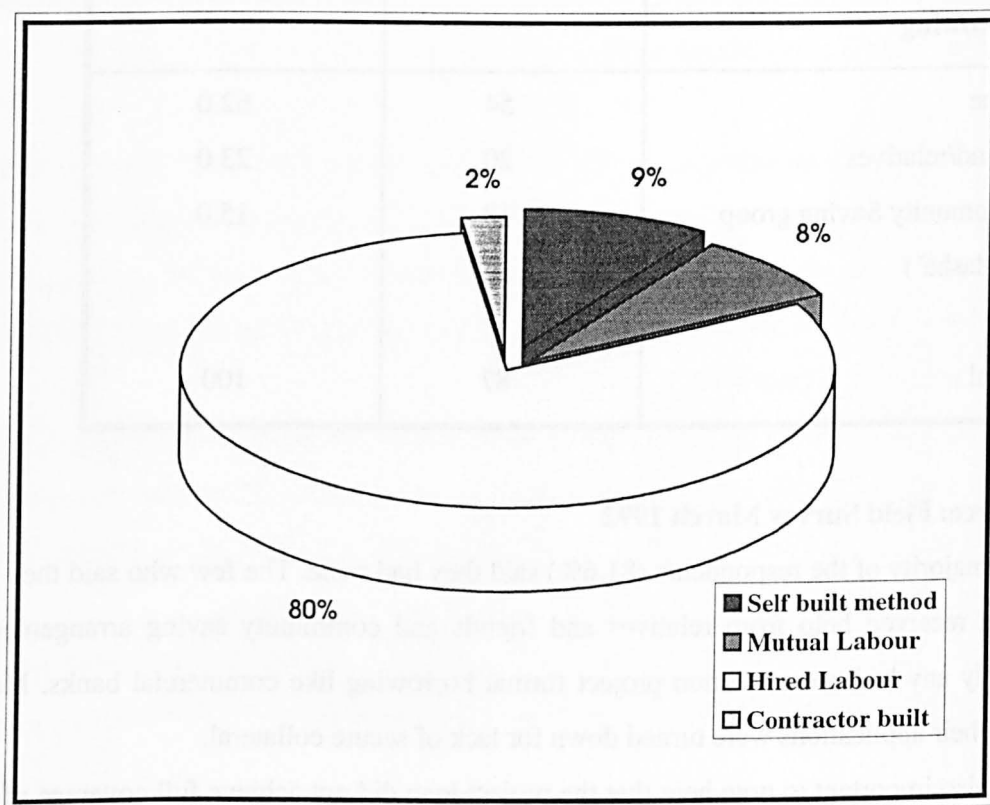


Fig 7.8 Methods of construction used

7.1.5 Findings on the methods of construction used.

It will be recalled that 33.6% of the nonconsolidators said the cost of labour was a major cause of their lack of affordability for building. It was also hypothesised that beneficiaries used paid labour rather than the self-build method that the project assumed. The findings are presented in the table below and illustrated by fig.7.8

The planners assumed that self help labour would be used at no monetary cost to the plot allottees. However this assumption turned out to be wrong because the majority of plot allottees, for various reasons which will be discussed later, preferred and actually used, hired labour for most parts of the construction.

Table 7-12: methods of construction used

Method of construction used	Frequency	
	No	%
Self built method	8	9.3
Mutual labour method	7	8.0
Hired labour	70	80.4
contractor built	2	2.3
Total	87	100.0

Source: Field Survey, March 1992

Only 9.3% of the house builders said they used the self-built method. The majority (80.4%) have used and intend to continue using hired labour for the entire building process apart from the supervision, which most of them did personally. Only a few about 2.3 per cent are using the constructor built method for everything, but they are not a concern of this investigation because their incomes are above the target group. When asked why they chose to use hired labour, the majority (70%) said they had no spare time because they were fully employed, and about 26.5% said they did not know how to build with the modern materials, while only 3.5% said they could afford to pay for the cost of labour. This means that the majority of the plot allottees were fully employed and

could not afford the time to engage in self built labour. It is very important to note here that, although similar findings were reported by the World Bank evaluation studies of earlier projects in Lusaka, Philippines and El Salvador (Bamberger et al. 1982), the same false assumption was repeated here. This means that no lesson is being learnt from the evaluation exercise. The response regarding the lack of technical skill is also very important. The same authorities who imposed the use of modern materials did not bother to give any technical assistance to enable them to be used. So they had no choice but to use hired skilled labour. Even some of those who said they had no time, might be shying away from confessing their ignorance. As Richard Martin has rightly put it in the case of Lusaka project, "The reason for lack of attempts by householders to build their own houses was more a lack of confidence than lack of time." May be, if they had had the technical knowledge they would have found the time, at weekends or evenings, to build, thus saving the money paid for labour to be put towards purchasing more materials and hence increasing their progress.

The cost for paid labour has been found to account for 20% of the total cost of building houses in this project. This cost, which was not anticipated by the project authorities adds to the total cost of consolidation, which then becomes greater than the assumed affordable cost. The beneficiaries, particularly the low income earners who are normally not found to either have income surpluses or another source of money to supplement the project loan were not able to afford the total cost. So they used up the loan to buy materials and pay for labour up to a certain level of consolidation, mostly below the habitable stage, and then stopped when the money ran out. This implies that the level of fully consolidated houses will remain low as long as those houses remain uncompleted.

7.2 Findings on the size (number of rooms) of the basic unit

It was hypothesised that the number of rooms which the target beneficiaries needed in a basic unit is significantly more than that specified by the planners. The survey findings were revealed both by the responses given, as well as observation of the beneficiaries building practices. When they were asked to state the number of rooms which they needed, the following results were obtained (also illustrated by fig.7.9 facing page).

Table 7-13 : Number of rooms needed by the target beneficiaries

Number of rooms	Frequency	
	Number	%
1-3	23	20
4-6	68	59.1
6 and more	29	20.9

Mean: 5.9 Median: 6 Mode: 6

Source: Field Survey March 1992

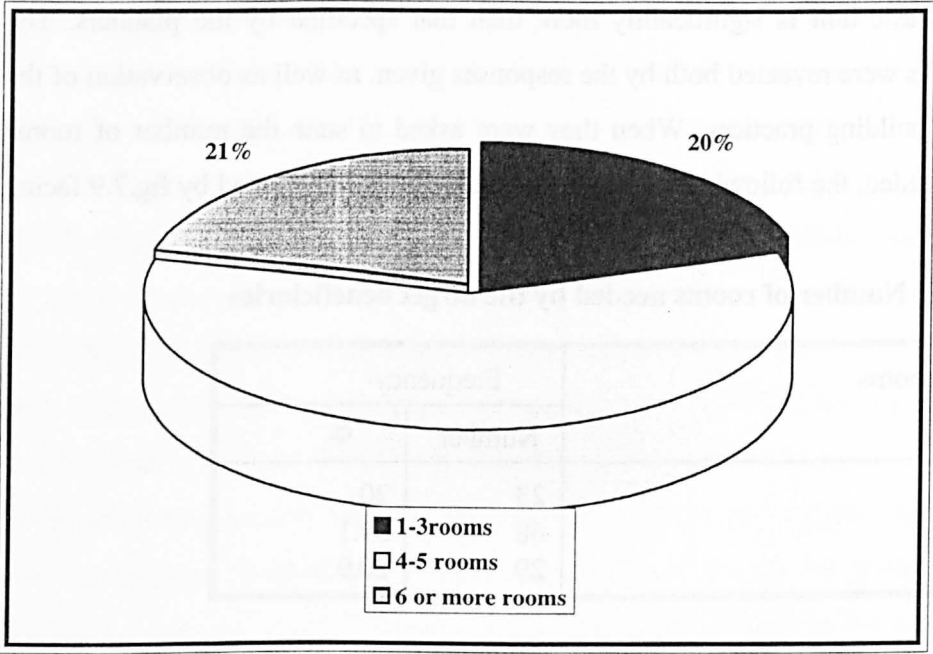


Fig 7.9 Number of rooms needed by the target beneficiaries

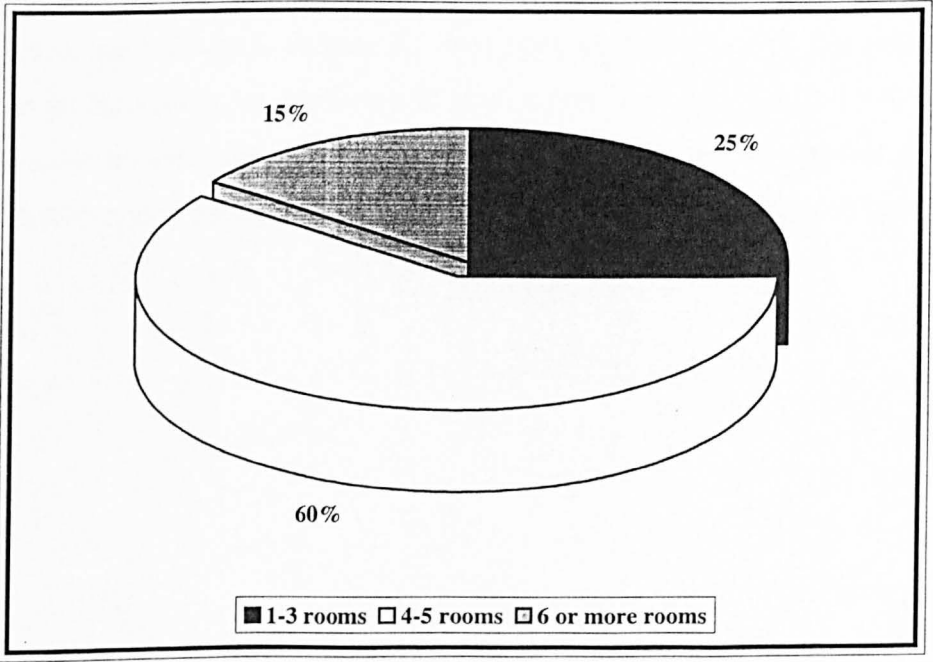


Fig 7.10 Number of rooms started in the uncompleted units

The majority of the beneficiaries (about 80%) said they needed more than three rooms, while only 20% needed less. The mean number of rooms needed was 5.9 and the mode 6 rooms. Their claims were further supported by the observation of their building practices. The number of rooms proposed in the uncompleted units were investigated and the following results obtained (illustrated by fig.7.10).

Table 7-14: Proposed number of rooms in the uncompleted units

Proposed number of rooms	Frequency	
	No	%
1 - 3	22	25
4 - 5	54	60.2
6 & over	13	14.8
Total	88	100.0

Source: Field Survey, March 1992

Only 25% of the started houses had less than three rooms while the majority (75%) aimed at larger houses with four or more rooms. This means that only 25% of them attempted to build the minimum unit recommended.

7.2.1 The gap between beneficiaries needs and project proposals

The t-test is not very appropriate here because one of the groups (specified number of rooms) has no variance. So the proportional difference was observed and level of significance was decided upon.

The basic unit specified by the Planners consisted of two bedrooms and a parlour. The above results have revealed that the average number of rooms required by the target beneficiaries is 5.5. Therefore the gap is the difference between the 3 rooms proposed by the project and the 5.5 rooms required by the target beneficiaries. This is significant because the difference is about 40%.

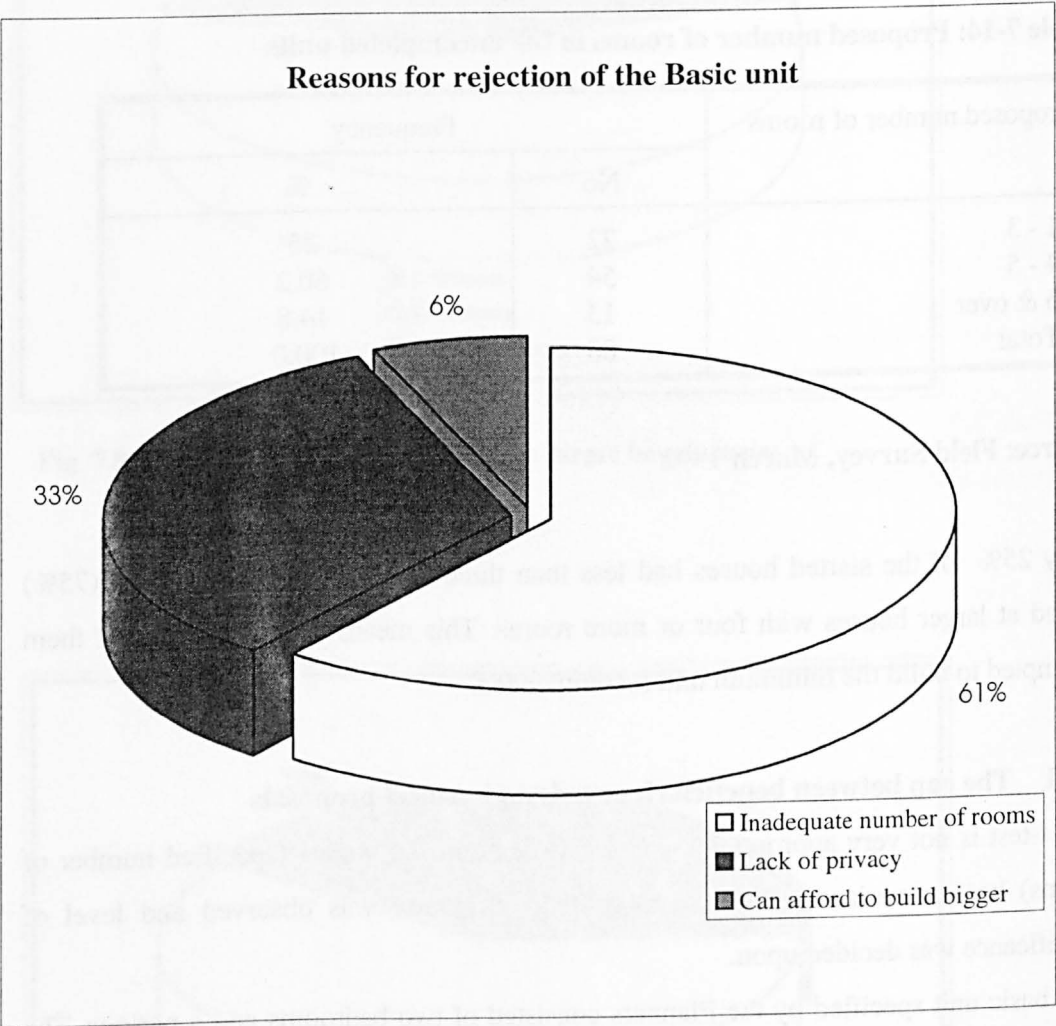


Fig 7.11 Reasons for rejection of the basic unit concept

7.2.2 Why the beneficiaries needed more rooms than proposed by the project planners

The target beneficiaries needed more rooms in a basic unit than that specified by the project planners, in order to accommodate all their household members.

Although, according to the project proposals, the idea behind the basic unit was to allow families to move on to sites as quickly as possible, while they carry on with the required expansions to meet their needs, this, for the majority of families was not feasible, because the two bedrooms specified were not even sufficient at the start. As we have seen in the socio-economic analysis, most target beneficiaries have large polygamous households. To cater for their families, the majority of the beneficiaries rejected this idea and had started building bigger units to suit their needs. The following table reveals their reasons for rejection.

Table 7-15: Reasons for the rejection of the basic unit concept of consolidation

Reasons for rejection of the basic unit concept of consolidation	Frequency	
	No	%
Inadequate number of rooms	70	60.8
Lack of privacy and security	38	33.0
Can afford a bigger unit	7	6.2
Total	115	100.0

Source: Field Survey, March 1992

Note that only 6.2% said they did not adopt the basic unit because they could afford to build bigger units. The majority, 93.8%, had reasons connected with the dislike for the basic unit concept, mostly the size of the unit and its lack of privacy for the needs of their large families. When we confronted some of them with the suggestions that had they adopted the basic unit (which cost less to build by virtue of its size), they would have completed their units by now and moved in. Most of them responded by saying that they would not move at all until they had enough rooms to accommodate everybody in the family. That is why they did not contemplate accepting the basic unit. What this

means is that most people were not ready or willing to make do with the two bedrooms basic unit specified contrary to the assumption of the planners. They are also ready to wait for as long as possible to meet their housing requirements. The problem here is that as long as they can not afford to complete the construction of the bigger houses they had started, the level of consolidation will remain low. In view of the current economic situation in Nigeria vis-à-vis the state of the beneficiaries' incomes (analysed in Chapter 6), this will not happen in the near future, at least not for the low income target group, unless some drastic measures are taken. This conclusion was supported by the response given by the nonconsolidators, who are still holding on to their uncompleted houses, when asked about the possible date of completing their houses. Only 28.7% said they were likely to complete within one to three years and 14.9% up to five years, while 25.3% could not put a date on it and the remaining 26.4% and 4.9% were going to lose their plots through sale and revocation respectively.

Of the total sample of the nonconsolidators (115), 43% (50) can be said to have failed to consolidate as a result of their attempt to build bigger units instead of adopting the basic unit method of consolidation. This category of nonconsolidators had spent more than the amount of money required to complete the basic unit on the construction of the bigger uncompleted units so far.

Further investigation of the beneficiaries' preferences for house design by asking them, reveals the following result.

Table 7:16 Project beneficiaries' preferences for house design

Preferences in housing design	Number	%
Large size of house	80	41.7
High quality of building materials	14	7.8
High level of services	27	14.1
Security	20	10.4
Privacy	50	26.0
Total responses	192	100

Source: Field Survey March 1992

The above responses indicate that the preference for bigger units was the most popular response (41.7%) followed by the need for privacy (26%) in the house. The use of high quality materials, surprisingly scored the least, which was only 7.8%. This is quite contrary to the general belief and to the findings of the evaluation of earlier projects (in Senegal and Kenya) regarding the target beneficiaries' desires and aspirations to use high quality building materials.

Investigation of the completed units in the project has also shown that the majority (80.0%) of the houses had more than the two bedrooms specified in the basic unit. Further analysis revealed that most (67.7%) of them were built bigger than the basic unit right from start. Only a few (32.3%) of house owners said they had built a basic unit and expanded later.

The above findings mean that the majority of the beneficiaries rejected the basic unit method of consolidation. Note that the project planners argue that the adoption of the basic unit concept was not a requirement, but a recommendation. This makes it almost a requirement rather than a recommendation. A recommendation would give choice and allow the adoption of other options which are totally absent here.

For those who could afford to build the bigger units to suit their immediate needs, the outcome was very good. What is worrying, however is that the majority of these people

are not the legitimate target group members, as shown by their income distribution, presented in Chapter 6. Although the legitimate groups have the same social needs and requirements for bigger units, they are often not successful in their attempts to achieve them due to their weak economic status, as discussed earlier in chapter 6 above. They end up with abandoned uncompleted units.

7.3 Summary and conclusions

This chapter has tested the hypotheses put forward by the study. It was found that the actual cost of building a basic unit was higher than what the target beneficiaries could afford. The high cost of building resulting from the rising cost of the required building materials, unanticipated cost of hired labour (which majority of beneficiaries had used), insufficiency of the project loans and absence of assumed savings and other sources of borrowing, has made the target beneficiaries unable to build or complete their houses thereby keeping the level of consolidation low. It was also found that the target beneficiaries needed more than the two sleeping rooms specified in a basic unit to suit their social and cultural needs and life styles. In an attempt to meet these needs, they started bigger units which they could not afford to complete given their weak economic status. They have also been found to express preferences for the use of local materials and build bigger units.

The above findings have provided strong evidence for accepting the hypothesis that the false assumption made by planners in estimates of affordability, needs and preferences of the target beneficiaries, has caused the low level of consolidation in the Makama Project.

The next chapter covers the summary of the findings, discussions and conclusions.

Chapter 8: Summary of findings, Discussions and Conclusions

8.0 Introduction

The survey findings were presented in the two preceding chapters (6&7). The purpose of this chapter is therefore to summarise and discuss the findings and draw conclusions as to the possible solution to the research problem based on the findings. This chapter is in two sections. The first section summarises the general and specific findings of the study, while the second discusses their policy implications and draws conclusions of the whole thesis, with suggestions of some possible solution to research problem, and the focus of future similar studies.

8.1 Summary of the general findings

The comparative analysis of the socio-economic and housing characteristics of the sample surveyed revealed a number of interesting findings which have offered supporting evidence for some of the hypotheses tested. The socio-economic characteristics analysed included, marital status, household sizes, incomes, level of education and types of occupation.

8.1.1 Findings on socio-economic characteristics

8.1.1.1 Social characteristics

Most of the household heads interviewed were males (95.7%) between the ages of 30 and 55. Most of them (90.3%) were found to be married to one or more wives. The household sizes were also found to be generally high in both groups compared with an average of 7.1 people per household. The implication of these findings on consolidation is that the nonconsolidators with large families may be less likely to be able to consolidate quickly.. Although no relationship was established by this study between the two variables, expenditure patterns of most households suggested that they needed to spend most or all of their incomes on food and other family expenditure and will be left with none to invest in housing. Their demonstrated lack of surplus income or savings further confirms this. In some cases project loans for house construction went into

families' most urgent needs (for example food and health care), thereby jeopardising the progress of consolidation.

8.1.1.2 Economic characteristics

It was found that most of the successful consolidators (62.4%) were from a higher income level, earning above the target maximum income of 500 Naira specified. On the other hand, most nonconsolidators (73.9%) were earning below 500 Naira. Also a t-test has revealed a significant difference between the income averages of the two groups showing that there is a positive association between income levels and consolidation. The higher the income of target beneficiaries the more likely they are to consolidate faster and vice versa. Those with higher incomes have also been found to be better educated and in more stable and permanent jobs. For instance, 85.3% were found to be in the civil service. On the other hand the nonconsolidators were mostly engaged in petty businesses with unstable incomes.

This finding implies that those who are better educated and with higher paid jobs are more able and willing to invest in housing. Furthermore, it was also demonstrated that those with stable jobs were better qualified to receive a project building loan. The unemployed and self-employed, on the other hand, could not provide secure enough collateral to qualify for a project loan.

8.1.1.3 Housing characteristics

A comparative analysis of the housing characteristics of the surveyed sample has shown that the nonconsolidating households are living in a worse housing situation than the consolidators. They live in a more crowded situation and have less access to basic services and community facilities. They have also been found to be paying more towards their housing than the consolidators thereby causing them economic hardship.

These finding stresses, significantly the problem and points to an urgent need for intervention to rescue the affected group. During the survey, they were asked to suggest ways they thought they could be helped, and they came up with various ideas. Some of the popular ones included: an increased project loan, being allowed the use of local

building materials, and the project authorities to take over and complete units and recharge the cost to them. Majority of the nonconsolidators were reported to have said they were willing to repay the cost of the completed units over an agreed period of time.

8.1.2 Summary of Specific findings

The specific findings are those on the hypotheses test results. The results revealed that the low level of consolidation in the project can be associated with two main factors: i) the target group's lack of affordability for the high cost of building with specified building materials, and ii) the unsuitability of the basic unit concept for the target group. The lack of affordability for the high cost of building has been found to result from the mandatory use of high cost building materials, unanticipated cost of hired labour which beneficiaries preferred and used, the weak economic status of target group and lack of access to sufficient project loan and non-project borrowing.

Unsuitability of basic unit refers to mainly to its size which has less number of rooms for the beneficiaries' needs and social requirements.

8.1.2.1 Findings on lack of affordability for the cost of building

It has been found that the majority target beneficiaries could not afford the cost of building a complete basic unit, this was revealed both by a t-test and their responses. The t-test revealed that the actual cost of building is significantly higher than the cost which the target group could afford. It was also shown that 92.8% of the beneficiaries said they did not consolidate because they could not afford the cost. A further analysis has also revealed that their lack of affordability was associated with high prices of the required building materials (72.4%); added cost of labour (paid labour 11.7%) used by the majority; and inadequacy of the Bank's construction loans (12.2%), coupled with lack of other supplementary sources of finance.

8.1.2.1.1 High prices of project required building materials required by the project

It was shown, from the market survey, that the prices of building materials have sky rocketed over the period of the project implementation. Some materials like cement, roofing sheets, and steel went up by several hundreds percent as a result of external factors which the project had not foreseen. These factors include, the rising rates of inflation, devaluation of the Nigerian national currency (Naira) and the dependence on importation of building materials. Economic forces of supply and demand also played a role. It has been widely reported (Kunle Abdul Wahab 1990, Fed. Govt. NHP 1991) that the Nigerian building materials industries can not cope with the demand for their products, because they are too few in number and often produce below their capacity. This creates shortages which push prices up. The activities of the long chains of agents in the marketing of these materials only exacerbate the problem. They artificially create scarcity in some cases and force prices up to maximise the profit. The attempt to reduce shortages by importation of such materials leads to higher prices in the end.

These factors became more critical in the mid 1980s when the structural adjustment programme was introduced in the country with the pretext of reforming the economy. The structural adjustment does not only affect building materials but all commodities and services. The prices of food items, school fees, hospital bills etc., became unbearable. This meant that the cost of basic living needs, such as food and health services could in many cases be taking up all the income, nothing was left to invest in housing.

It is important to point out here that most of the factors described above hardly affected the prices of locally available materials like mud because they need very little processing and are found in abundance in most parts of the country. In the building materials price table in Chapter Seven, it was shown that, the rise in the price of mud was very subtle and could easily be borne by beneficiaries.

Furthermore, the traditional building practice of the target beneficiaries demonstrated clearly their preference for the use of mud for building large compounds. The housing survey of the Makama area done before the project, revealed that 93.1% of the houses

were built with mud walls and most of them rendered with cement plaster. Also when some of the target beneficiaries were asked, during the survey in 1992, whether they were willing to use the local materials if allowed, the majority (67.8%) of them said they were. Given their limited resources, they often go for something more realistically priced for them by making trade-offs. For instance given a choice between building many rooms with traditional materials and fewer with high priced modern materials, they would often go for more the former. This was further demonstrated by the fact that of all the non-consolidators interviewed, none complained of the standards of materials as a problem in their current housing, though many lived in mud houses. The most common complaints were lack of services (35%), over crowding (44.5%) and lack of security (20.5%). Also when respondents were asked about their preferences for a house design, the results revealed that materials quality had the least response(7.8%), while large size of house was highest (41.7%) followed by privacy (26.0%), high level of services (14.1) and security (10.4%).

Why then did the project authority insist on the use of concrete, concrete blocks and burnt bricks? The professionals who make decisions on behalf of the housing authorities insist on the use of high quality modern materials for a number of reasons: firstly, their prejudices against the use of local traditional materials, lead many to regard any materials other than concrete and cement as not good enough. It is important to note that at the inception stages of the Makama project, the original idea was that those on low income could be allowed to use the local mud if they wanted. When the project took off, the use of mud for any part of the building was banned. When the project architect was questioned on this issue, he simply said that if they allow people to use mud, they will only be creating another slum.

Secondly, the professionals are reluctant to let go the power of decision making because it feels good to the professional to tell the poor people what they can or can not do. The idea of letting the poor make decisions about not only how much they want to invest in housing, but also how and with what they want to build, is seen by many professionals as a threat to their authority.

8.1.2.1.2. Inadequacy of the project loan and lack of savings and non project borrowing sources.

The majority of the target beneficiaries have been found to have relied totally on the project loan for both purchasing of land and building their units. They had no savings or other sources from which to borrow money. Therefore the size of the loan they had was very crucial to them. During the survey, 80% of those interviewed said the amount of loan they were given was insufficient for building the basic unit. Furthermore, when the cost of building a basic unit was compared with the amount of loan made available, a wide gap was revealed. The analysis also showed that 21.7% had not received the loan at the time of survey.

While the average amount of loan available to the low income beneficiaries (including money to cover the cost of land), was 4,500 Naira, the cost of building the basic unit with the required materials was 6,400 Naira in 1985, when most beneficiaries started building. This rose further to 12,000 Naira in 1988, and 22,000 Naira by 1992. Although the loan was increased by about 20% in 1990, the amount did not significantly narrow the gap.

There is a limit to how much the loans can be increased, because the project resources are limited, and also the amount has to take into account the beneficiaries' ability to repay.

It was also assumed by project planners, that the target beneficiaries would have non-project sources of finance and savings to supplement their loan, this assumption was found not to hold. The majority had no other sources of borrowing or income surpluses for savings.

8.1.2.1.3 Cost of hired labour for construction

The cost of labour, which in most cases amounted to nearly 20% of the total cost of building was not anticipated, because the project planners assumed free self-build labour was to be used by the allottees. As has been shown, 78.1% of the nonconsolidators claimed they were using, or intended to use, hired labour. This was because most of them were fully employed and could not afford the time. Also they did not have the

technical knowledge to build using the modern materials required. It is important to note that earlier studies in Lusaka, Philippines, and El Salvador (Bamberger 1982) revealed similar findings regarding the use of hired labour. The World Bank acknowledged these findings and even went a step further by reflecting them in its wider definition of a self-help. The wider definition now includes the use of hired labour and self supervised labour as a method of self-help building. However, the practice in the later projects did not reflect this because planners still assumed the use of labour would be free, and excluded that in the estimate cost of consolidation as was the case in the Makama project. Hence the low income target beneficiaries, who neither have income surpluses, nor other sources of finance, to supplement the loan, could not afford the total cost of full consolidation.

8.1.2.2 Findings on the size of the basic unit

It was shown that only 32.3% said they adopted the basic unit concept of consolidation, while the majority (67.7%) did not. Also, 75% of the nonconsolidators started building bigger units which they were unable to complete, leading to the low level of consolidation. As was shown in the analysis, the majority of the beneficiaries said they did not adopt the basic unit because it was unsuitable for their housing needs and requirements. The number of rooms were too few to meet their families' immediate needs and their design lacked the elements for privacy and security which they required to suit their life styles.

The analysis of household sizes, which showed that 77% of the total number of beneficiaries interviewed had 5 or more members in the household, and only 23% had fewer, supports this claim. It is important to make it clear that although there was no obligation on the households to start with only a basic unit, the project was only prepared to support them on that basis. Most families confessed even if they had started with a basic unit, they would still not have moved to the site until they are able to expand it to take their large families. Some of those who were unable to complete the bigger units they had started sold them to buy bigger compounds in a traditional area or to improve their current traditional houses. The higher income groups who bought them

built rental units, and lived in their other houses outside the project area. It is important to note that most of the rental accommodation is built of high quality materials and fully serviced. Also some of the high income, who bought plots, built high standard private houses to live in. Some typical examples of such houses were shown by various plates, in Chapter 3.

The prospects of being able to build high standard houses on cheaper serviced urban land has increased the interest of the high income group in the project. Furthermore, the project unit had also, at a certain stage of the implementation, embarked on a plot revocation exercise. At the time of Survey (1992), the unit had revoked plot allocations from nearly 400 of the original allottees who could not consolidate. Most of the revoked plots were allocated to people who are believed to have been from a higher income group.

8.2 Discussions and Conclusions

All the above findings point to the existence of a planning error which leaves a gap between what the project planners proposed and the actual affordability, housing needs and requirements of the target groups.

The existence of these gaps implies that the planners lacked an understanding and consideration for the target groups' housing needs, requirements and preferences.

These requirements and preferences are the necessities and realities of the way of life of most of the target group, and can not easily be compromised. For instance, the need for bigger units is necessary to cater for large families, and the need for security and privacy in the design layout, are required to maintain their traditional and religious values.

The basic unit concept proposed was found to be incompatible with the beneficiaries housing needs and requirements in a number of ways: firstly, the planners proposed a two bedroom basic unit, and the target beneficiaries needed more than that. Secondly, while the common building practice of the target groups revealed their preference for the compound type design style, with courtyards and a fencing wall to cater for their needs for privacy and security, the planners proposed a single block unit with neither fence nor courtyard.

It was also found that the planners have failed to make the cost of building affordable to the target beneficiaries. The type of building materials that were insisted upon by the project authorities is not affordable to the target group. The target beneficiaries have been found to be able and willing to use locally available traditional materials like mud which the Project authorities were not prepared to allow. The target groups' preference for cheaper local materials is an expression of their economic reality and not a dislike for permanent expensive materials.

It was also shown that the amount of loan made available for consolidation is far less than what is actually required. The target beneficiaries had neither savings nor other sources of loan to supplement the project loan, contrary to the Planners assumption. Also the target groups preferred the hired labour method of construction contrary to the self-build methods assumed by the planners.

8.2.1 Discussions

8.2.1.1 The need for convenience and privacy

Although this aspect is not one of the major focus of the study and therefore not analysed in great details, it is thought worth mentioning. This is because some of the target beneficiaries had expressed these needs, and also the available secondary data on the area suggest the need by the group.

The need for privacy is rooted in the traditional and religious values of the predominantly Muslim community of Makama. Most households (56%) were found to have 2 or more wives and many children. It is the requirement of both Islamic religion and traditional custom that each wife has a private room(s) to share with her children and the head of household his own room where the wives can visit in turn. This means that any household with more than one wife needs at least three sleeping rooms to start with. The basic unit offered two rooms and parlour. In the traditional housing settlements, people who are not economically strong enough to meet these requirements make certain trade off, for example bathing and cooking in the open and the use of cheaper building materials, etc., to enable them to afford the extra sleeping rooms which they consider more important. The project's proposals might have been based on the

assumption that even if beneficiaries needed more rooms, they can manage in the beginning with fewer before they can afford to expand. However their special circumstances, as discussed above, make it virtually impossible to do so. It is more than just a case of a large family with many children, the polygamous nature of the family complicates matters.

Furthermore, the important design elements (courtyards and fencing) for privacy and security were also neglected in the basic unit house design proposed. The courtyard is a very important element of design for the people's way of life. It is used for various activities including washing, cooking and sleeping when the weather is hot, which it is more often than not. The fencing wall is also needed for privacy, especially of females who should traditionally to be shielded from the public. It is also used as a deterrent to intruders and thieves. The courtyards and fencing wall are part and parcel of the Hausa architecture, and are valued highly by the people. This is reflected in most of the traditional housing in Bauchi. In fact, the very first step towards any house building is usually to put a fencing wall around the plot. Even in modern buildings, both courtyards and fencing walls are incorporated. Although no correlation has been made between these elements and consolidation by this study, beneficiaries have been reported to have expressed the desire for them. So for any design proposal in that part of this country not to consider these elements is a serious mistake.

It is very important to note that the planners and the architects, who made the proposals, are not unaware of the needs and the requirements of the people discussed above.

For instance, the social and traditional housing surveys conducted by the Dar Al Handasah consultants (1978) for the purpose of the project planning revealed findings that suggest the need for these requirements. The survey found that 91% of the household heads in Makama were Muslims, 56% of who were married to more than one wife, with the average household size of 7.1. Also 81.8% of women expressed the desire to have more children to add to the ones they already had, implying the likelihood of even larger household sizes.

The survey of the traditional housing designs and sizes also reveals that 80.5% of the houses in Makama were of the compound types with fence and courtyard, and 54.6% of

the compounds had more than three rooms. It was also found that 93.1% of the walls were of mud of which 54.4% were plastered with cement, and only 6.1% were of concrete blocks.

These findings were, however, taken for granted and not considered in the planning of the basic unit proposed

8.2.1.2 Material quality versus size of houses

The fact that the majority of households built larger houses with traditional materials expresses their preference for size over structure. It is also interesting to discover that a few of those who dropped out of the project by selling their plots and uncompleted houses bought compound houses built in traditional materials in other areas.

The project planners, on the other hand were more concerned with keeping the standards of materials high and the size of unit to the minimum. However if we recall the analysis of the peoples' preferences in house design discussed earlier in Chapter 7 (Table 7:14), very few (only 7.8%) mentioned high standard building materials. The majority expressed preference for bigger unit. This further demonstrates the gap between the planners' assumptions and the peoples' actual preferences and requirements. It is very interesting to discover that peoples prejudices for the use of local materials, which have been formed during the oil boom, are beginning to give way to the economic realities of their situations. However this is not to say that people do not like high standard material. They do, but they prefer to deal with what they consider as most important to them first given their limited resources. The point here is that if these preferences were taken into consideration in the planning of the project, the use of a certain standard of materials would not have been imposed. This meant people would have built their houses to their requirements using the types and standards of materials they could afford. The duty of the project would have been only to ensure those materials were not a health or safety hazards to the builders (e.g. thatch), and the resulting consolidation problems would have been minimised.

8.2.1.3 Implications for the Aided Self-help Strategy

Aided self-help, among other things, was meant to solve the problem of the incompatibility of low income housing with the target group by allowing the beneficiaries the freedom to build by themselves, however, the findings above proved to the contrary. A basic unit was recommended and the type of materials to be used specified, denying the plot allottees the freedom of choice. Though the planners argue that adoption of the basic unit was not a requirement but recommendation, in practice it was almost a requirement given the size of loan and the type of materials required. This is in defiance of the principles of self-help housing put forward by J.F.C. Turner. The beneficiaries were neither allowed to decide for themselves nor involved in the decision making process. While the project planners were concerned with controlling standard and keeping the cost to a minimum, they went for a basic unit. The plot allottees, on the other hand, showed their preference for bigger units, even if these had to be in traditional materials rather than smaller units in modern materials.

It is important to note that the incompatibility between the housing provided by the planners and the requirements of the low income earners, has always been one of the main problems with the public direct construction system of housing. The proponents of aided self-help housing like J.F.C Turner was hoping that the problems would be eliminated by giving the people freedom to build their own houses to their needs and requirements. All evidence point to the fact that the `freedom to build` is not happening yet.

8.2.1.4 Conclusions and contribution to knowledge

The specific findings have provided strong evidence for accepting the hypothesis that the low level of consolidation in the Makama project was caused by the inaccurate planning estimates and assumptions regarding the housing affordability, needs and preferences of the target beneficiaries.

The general findings have also led to the confirmation that the target beneficiaries are living in a worse housing situation as a consequence of their lack of consolidation. Their weak socio-economic circumstances also mean that they are unable to help

themselves out of this dilemma and therefore need an urgent intervention. Although earlier reports have pointed to the existence of the consolidation problem, no empirical investigation of the causes of this problem is known to the researcher. This study, it is hoped, has helped in filling this gap in knowledge about the causes of the problem, through empirical investigation. Suggestions as to the measures, which should be taken to contribute towards rectifying the problem have been made. These were based on the findings of the study as well as the knowledge of existing workable solutions to similar problems. The measures suggested are focused on eliminating the problem, as well as preventing its occurrence in similar future projects in Nigeria, and elsewhere in the Developing World. Such measures include: the promotion of the use of local building materials and lower design and construction standards; the mobilisation of sources of finance for housing; reformation of existing planning and building laws, to make them more responsive to current situations; encouraging the participation of the target group in planning, and implementation of future projects.

i) Promotion of the use of local building materials and lower construction standards for low income housing.

It was found, by the study, that the target beneficiaries lacked the affordability for the cost of building housing units to the standards required by the project. The major constraints were also found to be the mandatory use of highly priced building materials and the lack of sufficient funds for construction.

One of the most interesting findings of this study is the fact that most people interviewed were willing to use local/traditional building materials, particularly mud, for building their houses. The facilitation and encouragement of the use of local materials should therefore be desirable. Locally available or locally produced materials like mud, clay and limestone are not only cheaper but also durable and aesthetically good, and are found in abundance in most parts of the country. (a) **Mud**, for instance, is about the most abundant and widely used building material in Nigeria. It has been, and is still being, used in traditional housing in most parts of the country. Mud is relatively cheap, needs little or no technology and skilled labour to be used, and is suitable for the warm

climatic conditions in most part of the country throughout the year. It also helps to maintain the traditional character of the housing environment. The major disadvantages of mud are that it needs more regular maintenance because of its inability to withstand weathering, it also will not cover a long span and is not suitable for multi-storey construction. However, as Hassan Fathy (1975) has pointed out in his experiment with mud architecture in rural Egypt, if the walls are made adequately thick, and stones are used as foundations, the mud house can withstand any kind of condition. Mud can be used with stones for foundations, flooring, walling as well as flat, domed or vaulted roofs, as observed in many traditional houses in Northern part of Nigeria. It can be made into sun dried bricks, or just mixed with water and used as it is. Traditionally mud is mixed with straw to increase its elasticity and strength. These days, experiments have shown that adding lime also improves the strength of mud. This has been used in countries like India to improve the strength of soils used for low-income housing and has been found effective. They have been able to achieve up to two-storey constructions with mud that is strengthened with lime. This can also be exploited in some parts of Nigeria where lime is found in abundance. **(b) Clay**, also found in abundance in most part of the Nigeria, has already been widely use in the country, mostly in form of factory processed clay bricks. The government of Nigeria, having realised this as a valuable resource of building materials, has made many efforts to exploit its potential. In 1977, for instance, seven factories of clay bricks were established across the country. Factories produced all varieties of bricks and tiles which were being used for decking, walling, tiling and roofing, as well as paving. Local and state governments also embarked on a number of projects, including housing, to demonstrate and encourage people to use clay bricks. However, the problem, as has been discussed earlier, is the high production cost owing to use of sophisticated technology.

The production cost was automatically transferred to the consumer which made the bricks difficult for the poor people to afford. Those who could afford the bricks could also afford to buy concrete blocks, and they see it as more progressive to build with cement. So there was a situation where factories were piling warehouses high with clay

bricks with nobody interested in buying them. Some had to cut down their production while others even closed down.

The new approach should therefore be directed towards exploiting the local resources of both local raw materials and technology in the production and distribution of building materials. This approach should not only provide cheaper materials, but is also more sustainable. Small scale locally based factories, rather than large scale central factories, should be preferred. Government should both assist and encourage private investors in establishing such small locally based factories producing building materials, by directing commercial banks to give lending priority to those investors.

The government should encourage the creation of local co-operative societies for direct production and distribution of local building materials on behalf of their members. Such societies should be provided with access to loans through the Federal Mortgage Bank of Nigeria. Also the government should intensify and fund research into the exploitation, development, production and the use of local building materials. Such research activities, in addition to investigating the low cost masonry materials like clay and mud mentioned above, should also look into the possibility of using petroleum residues, plastics and some agricultural waste such as sugar cane and bamboo.

An institute for housing, vested with the responsibility of research into housing and building materials for housing, should be established. The institute should undertake extensive research on materials, and demonstrate easy methods of using them. It should also develop cheap and durable materials economically viable for production in small scale local factories. The institute should get its funding partly from the government budget and partly from possible grants from foreign aid agencies to enable it to undertake its task.

The government should set up a separate building materials research institute for the country, similar to ones established in Kenya and India. Its responsibility should primarily be to exploit the potentials of local materials and find ways to improve their strength and durability. There are a number of similar studies and research being undertaken in the building departments of universities and technical colleges in the country at the moment. The problem is that there is a lack of sufficient funding and co-

ordination with the building industries. Studies often get no further than the lab and are purely academic, with little or no practical value.

The work of this institute should therefore be co-ordinated with the construction industries, which should bear some of the burden of its funding.

The aim is for Nigeria to be self-sufficient in the production of building materials.

Although, it was revealed in the survey that people's attitudes towards local materials are changing, due to economic realities, the professional (architects and planners) authorities are still heavily prejudiced.

Government should not only allow the use of local materials but also encourage people to use them by demonstrating them in public projects. The housing professionals especially Architects and Planners, should re-educate themselves and face the reality of the situation, while bearing in mind that their services will fail unless they satisfy people's needs and requirements. A traditional housing design module has been introduced in the majority of the Schools of Architecture in Nigeria. This is a good practice and should be continued and extended to colleges of building technology.

Finally, there is a need to reform the Nigerian building bye-laws and standards codes. Laws restricting the use of certain local materials should be reviewed, with the possibility of changing them, in so far as they do not contravene health and safety. Mud, for instance should be made a legally acceptable material for construction. In the Makama project for instance, it was noted that a few houses were started with mud walls but were later discontinued and have served demolition orders by the project authorities. The planning regulations and building bye-laws, which have been inherited from the colonial masters, are still in use today in Nigeria with very minor or no modifications at all (Mabogunje 1978).

Planning regulations should be dynamic, changing with the circumstances and situations in society at any given time. The current situation in the country is such that the majority of the low income earners Nigerians can not afford the type and nature of the building

materials insisted upon in the regulations. The new regulations should make provision for them to use the type of materials they can afford.

Anticipated outcome if locally produced materials are used

- (a) Better relationship between costs and income: the target low income beneficiaries of the self-help and other low income housing projects will be able to afford the cost of materials for full consolidation of their plots. This may also encourage house building activities outside the project area thereby increasing the stock of housing generally.
- (b) Control of project invasion by a higher income group. If the use of local materials is allowed in low-income housing projects, it will discourage the invasion of the project by higher income groups who are ambitious and can afford to build with imported materials. This means that the low income earners will have more chances of benefiting from their project with the absence of the high income competitors.
- (c) Employment generation. The local production of bricks for the project in an on-site factory will provide temporary employment and a source of extra income for the beneficiaries of the project as well as other local labour.
- (d) Control prices of other materials. If the local materials have become officially acceptable for housing, more people will build with them and this will reduce the demand for other materials like cement, forcing the prices to drop. Also fewer materials will be imported, thereby saving substantial amounts of valuable foreign exchange that could be used to purchase more essential things like medical equipment and drugs.
- (e) Larger basic units can be achieved using local materials with the same amount of money needed to build using the required materials. This means that the target beneficiaries will have more chance to achieve their spatial requirements with the same resources.

ii) Mobilisation of housing finance

The lack of sufficient money for construction has hindered the consolidation process in most cases, as has already been shown. Contrary to the assumption that the target group would have other sources of money to supplement their loan, the majority of the low

income target group interviewed had none. Furthermore, they do not qualify for, and cannot afford a housing loan from commercial banks because of the secure collateral and high interest rates demanded. Therefore the following measures should be taken to facilitate finance for housing in general, and low income housing in particular.

1) Nigerian Government should expand the capital base of the Federal Mortgage Bank above the current limit in order to cope with the increasing demand for mortgage loans. The bank should also devise strategies to encourage private savings by individual, such as incentives like qualification for a housing loan by saving so much money, as some commercial banks are already doing in Nigeria. The loan should be at a low interest, with longer (20-25 years) amortisation period to increase affordability by the poor groups.

2) Employers of labour should be actively involved in facilitating loans for housing to their employees. This can be done through compulsory monthly savings deducted at source from wages and saved into a general fund that can be made available for loans towards housing. This may not be welcome by many employees, but if they are properly educated as to the benefits of the scheme many would be glad to join.

However, this applies to formal employees. Those in the informal sector, should be encouraged, and given assistance, to form their own local co-operative societies and saving schemes to build up funds that can be used for housing.

A National Housing Fund was set up in 1989 for government employees on grades 1 to 4. They make a compulsory monthly contribution of 4% of their incomes to the fund. This should be enlarged to include those in higher grades, thereby increasing the size of funds available.

3) Co-operative societies: many such groups already exist among local traders and some female groups, but only on a very small scale called 'Adashe' in the local language. Usually, these savings are drawn out by members, in turn, to be used for marriage and other ceremonies. If these were expanded, with the assistance of the government, they would provide a very viable source of housing finance. Most people have problems saving on their own, but are ready and willing to contribute to the group savings in order not to be looked down upon by other members. The society members can also help in

providing mutual help labour in building their houses, especially where there are some skilled members like masons and carpenters.

iii) Participation of target beneficiaries in planning and implementation of their projects

In the Makama project, the beneficiaries had rejected the basic unit concept proposed to them by the planners because it was incompatible with their housing needs and requirements. This was because they were neither involved in preparing the proposals nor given the freedom to express their priorities and preferences. It is therefore recommended that in planning similar future projects, the target beneficiaries should be given the freedom to build their houses in their own local styles, while the project provides technical assistance to them.

The target beneficiaries should be actively involved in the planning and implementation of the project through the following channels:

- 1) Prior to project planning, an extensive housing survey of the intended beneficiaries should be undertaken by project Planners and Architects to investigate the peoples' requirements, needs and preferences in housing. The information should be analysed and used in the planning and design of the new housing projects. It can be used to estimate the size of units (number of rooms) the beneficiaries will require, and the type of materials which will be realistic to the particular group being catered for. With this in mind, the probable cost of building can be estimated. It is not necessary at this stage to propose a prototype design to the beneficiaries because they will have different priorities and preferences depending on their particular circumstances.

- 2) The individual beneficiaries who are eventually allocated plots should work together with the project Architects, who are local and understand the culture of the people, to plan and design their houses to their requirements. The project unit should provide the architects' services to the beneficiaries as part of the project's technical assistance. Most people will know exactly what they want in their future houses, such as the elements they want to be included, the different positions of their rooms and how they should relate to one another. What they would not know is how to translate that into a design on

paper. Some people may tend to be over-ambitious, the professionals with the knowledge of the resources available should be able to give them useful and realistic advice on this matter.

A design produced this way will therefore reflect people's requirements, needs and values.

iv) Improvement of the socio-economic status of the target beneficiaries.

The major economic factors found to be affecting consolidation are income and employment. Those with low incomes were less able to consolidate than those with higher. Also those with stable employment and a definite monthly wage were more willing to invest in housing than those without. It is therefore essential to raise the level of incomes one way or another. It is true that when incomes are raised, prices of commodities go up, but it is not necessary to raise income directly. By creating more job opportunities and encouraging local businesses, the incomes of people can be raised indirectly.

(a) Employment and income. More local industries should be created in the project town and area to provide increased source of income for the beneficiaries. Also training schemes for crafts and local technology should be established as part of the housing schemes. It is usually mentioned in the World Bank's documents that employment creation is part of a self-help housing scheme, but this element rarely exists in practice. For instance in the Makama project, an industrial estate to provide employment opportunity for the beneficiaries was supposed to be part of the housing scheme. The estate was later converted to residential plots which are being allocated to the higher income group. The project authorities assumed, and expected that private entrepreneurs would buy plots and establish local industries. No one showed any interest, contrary to the assumptions. In future, the government should invest in establishing local industries that will provide employment for the local people as part of the project. A local building materials industry, for instance, would be very useful in such an area. This will not only provide employment, but also a ready source of supply of building materials for the project.

(b) Adult education and family planning: adult education, especially for adult females, should be organised as part of the housing schemes. Most women were found to be uneducated in this area. They should be given some adult education and local training to enable them to work to earn and contribute to the household's income. They should also be educated in family planning matters to help control the size of their household, and ease the financial burden on the household heads. People should be properly educated about the importance of this, and not just be issued with pills without understanding why they should be using them. If they properly understand, they will even do it by choice without being advised to do so.

v) Improvement of the quality and quantity of the project implementation staff

It was obvious during the survey that the project unit was understaffed, with very few professionals. There is only one architect, one planner and a surveyor to handle the project. This is very inadequate for the amount, and quality, of service required. Also the unit was not entrusted with full responsibility for the implementation of the project. Most decisions on project matters had to be referred to the state Ministry of Lands, thereby causing unnecessary delays. This was also a major source of delay in the implementation of the project. To avoid this in the future,

(1) It is recommended that the project unit be adequately staffed with properly trained and experienced professionals who will be able to handle the implementation efficiently. Project planners and architects should be local, and if possible indigenous to the region. This will help in solving the problems of lack of understanding and appreciation of beneficiaries' culture and values which should be reflected in their housing designs. The use of foreign professionals should be completely discouraged.

(2) The staff of the unit should be given autonomy to take decisions without having to refer to the state ministry, especially in matters regarding plot allocation. This will reduce unnecessary delays and save time during implementation.

vi) Facilitating the supply of more middle and high income housing.

It is also recommended that the supply of middle and high income housing should be facilitated. It was very obvious that there is an acute shortage of middle income housing in Bauchi. Although this study has not shown any empirical evidence to demonstrate this, it has been gathered from discussions with housing experts that it is the case. The shortage was believed to have led to the middle income invasion of a low income project. The majority of the middle income earners who were found to be benefiting, said they had no other choice. They could neither afford the exorbitant price of plots, nor commercial loans at a high interest.

Future low income projects should be planned along side middle income ones to give everyone an opportunity, and increase the chances of the poor benefiting from projects meant for them.

8.2.2 Conclusions

It is hoped that the findings of this study have helped to fill the gap in knowledge about the causes of the low level of consolidation in the World Bank Aided Sites and Services Projects. It is also hoped that the suggestions made will contribute towards eliminating the problem in the Makama project and other similar projects in Nigeria, and elsewhere in the world. It is also hoped that the findings and the suggestions made will help in the planning and implementation of future sites and services projects.

However, this study, because of the limitations of its scope, is not exhaustive of the problems in Sites and Services Projects. It is recommended that more studies be carried out to test the validity of the above findings in similar projects in other locations. Future studies are needed to focus on other aspects of the project which are not covered by this study. These aspects include:

(a) Commercialisation of the Sites and Services project. A detailed study is required to investigate the effect of the commercialisation of the project on the beneficiaries. Preliminary investigations by this study already point to the fact that the project might be commercialised by the alarming proportion of renters and absentee landlords on the

project site. However, because this is not a major focus of the study, no further investigation was undertaken.

(b) Further studies are also needed to investigate the plot allocation procedure, how efficient it was, the methods used to verify information provided on applications, and whether or not the process was just and fair.

(c) The impact of the Makama project on the land and housing market in Bauchi town. It would be interesting to investigate how the project has affected the land and property market.

The overall conclusion from this study is that the aided Sites and Services Strategy, despite all its bottlenecks, is a viable solution to the low-income problem. With the current situation of land and housing markets in most developing countries, it seems to the researcher that the strategy provides the only possible way that the homeless low income earners can realise their dreams of owning a plot and building their future homes. Although neither the results of this study nor of others warrant this optimism, the strategy is still in the trial stage in most countries, and lessons learnt from mistakes can be corrected in the future. Many will be affected by the mistakes, but it is a worthwhile venture and should not be abandoned. It is definitely a step in the right direction. It is therefore strongly recommended that the Sites and Services Schemes be expanded in Nigeria and other Developing Countries. However, new projects must take into consideration the continuous findings and informed suggestions made by researchers and observers regarding ways of making the strategy more effective.

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Date 22 November 1991



Appendix i

INSTITUTE of
PLANNING STUDIES

Department of
Architecture
and Planning

To Whom It May Concern

Mrs Rukaiyatu Ahmed is a full-time research student at the Institute of Planning Studies, University of Nottingham.

Mrs Ahmed is at present carrying out a field survey for her PhD thesis on the cost of consolidation in the World Bank Assisted Self-help Housing Projects in Nigeria. I would be most grateful if you could give her every assistance.

University Park
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NG7 2RD

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(0602) 423503

S Jalloh
Lecturer and Supervisor



Date 22 November 1991

Appendix i

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S Jalloh
Lecturer and Supervisor



Brian W. G. Roberts

Chartered Architect, Chartered Town Planner, Project Manager

30 Sept 1991

Dear Professor Moughton,

I have been approached by one of your students, Mrs. R. Ahmed to supply details of a study I was concerned with in Bauchi State, Nigeria in 1978.

I have left the firm involved and I know that many copies of the report were destroyed. I rescued some of them but very few remain.

I enclose one copy of each of the following:—

Final Report : Vol. 1 & 3
 : Vol. 3 of 3

Off print : Study IV regarding Land Tenure

Volume 2 of 3 was an A0 sized set of drawings showing the design and service mains etc. No copies of these large sheets remain.

Please accept these volumes as a donation to your library, which Mrs Ahmed can be the first to use. I trust the Librarian will make sure they remain available for other students at other times.

Yours sincerely

Brian W. G. Roberts.

cc. Mrs. R. Ahmed

APPENDIX iii

Questionnaires administered to the beneficiaries of the World Bank Assisted Makama Sites and Services Project

Greet the respondent and introduce yourself explaining to him the purpose of the study and how important it is to get his co operation. Also reassure him that any peace of information provided will be treated in strict confidence.

1. What is your marital status?
 - a) Married
 - b) Single
 - c) Divorced
 - d) widowed

2. What is the is the size of your Household?

3. What is your main occupation?
 - a) Farmer
 - b) trader/businessman
 - c) Civil servant
 - d) Teacher(private)
 - e) Artisant

4. What is your total Income per month (in Naira, N17=£1)?

5. Do you Own the house you live in?
 - a) Renter
 - b) Owner consolidator
 - c) Owner non consolidator

If the anwer to questioin 5 is a), proceed upto question 9 and then continue from question 21 upto 30. But if answer is either b) or c), continue from question 10 upto the next instruction.

6. How much is your monthly rent (in Naira)?

7. Do you Know your Land Lord very well? if yes what is his occupation (where applicable)?

- a) Farmer
- b) trader/businessman
- c) Civil servant
- d) artisan
- e) Other Please specify

8. Did you Know about this project when it was started?

- a) Yes
- b) No

9. If you Knew about the project, why did you not participate ?

- a) failed application (give reasons for failure)
- b) can not afford the cost of building so did not apply
- c) dropped out of the project.
- d) Not in Bauchi at the time
- e) didn't have a need to own a house at that time

10. How did you acquire your plot?

- a) Allocated by the project
- b) bought from an original allottee
- c) given by a friend or relative

11. Can you remember the date /year you got the plot?

12. Did you start the construction immediately?

- a) yes
- b) no

13. What caused the delay (where applicable)?

- a) Lack of initial funds
- b) delays in obtaining Mortgage loan
- c) delays in installation of services
- d) used the initial loan to further business
- e) reluctance to move from former area
- f) Other please specify

Have you consolidated (completed your house and is living in it)? Yes/no

If the answer to above question is yes, continue up to question 31 and if no Proceed from question 34 to the end.

14. How long did it take you to complete the house?
15. What method(s) of construction did you use to build your house?
 - a) Self-help
 - b) Hired labour and self supervised
 - c) contracted
 - d) a&b
 - e) Other
16. Can you estimate how much it cost you to build the house (in Naira)?
17. Where did you get the money to build the house?
 - a) Mortgage loan
 - b) private savings
 - c) private money lenders
 - d) donations from relatives & relatives
 - e) Compensation from the project unit
 - f) Other
18. If you took mortgage loan was it sufficient ?
 - a) yes
 - b) no
19. How much (in Naira) is your monthly mortgage repayment.
20. At what stage of construction did you move in?
 - a) core unit
 - b) completed house
21. How many bedrooms do you have in the house?
22. Are sub-letting any part of the house?
23. If yes, how many rooms are to the exclusive use of your family

24. What type of materials did you use in building the following parts of your house?

- a) Foundation
- b) Walls
- c) Floors
- d) Roof
- e) ceiling
- f) doors
- g) window
- h) finishes

25. Do you have Electricity in the house?

- a) Yes
- b) No

26. What is the source of your water supply

- a) Private Tap
- b) private well
- c) Communal tap
- d) communal well
- e) Water seller

27. What type of toilet system do have in the house?

- a) Ordinary pit latrine only
- b) V.I.P. pit latrine
- c) Water system
- d) no latrine yet

28. In what type of housing were you living prior to this project

- a) Own house
- b) rented accommodation
- c) Shared accommodation
- d) In a government housing.

29. How much rent were you paying every month?
(where applicable)

30. Do you think your housing situation was made better by this project or not?
- a) better
 - b) worse
 - c) no difference
31. Can you please list the range of benefit if any you accrued from this project?(in order of their importance to you)
32. What are the major problems you currently experience in the project?
33. What changes if any Do you wish to see implemented in the project or in similar future projects if you were to participate?
- questions 34 to the end are for non consolidators only
34. How far have you gone with building your house?
- a) Have not started any construction
 - b) construction upto DPC (damp proof course) level
 - c) block work upto lintel
 - d) roofing stage
 - e) finished but unoccupied
35. how many habitable rooms do you propose in the uncompleted house?
36. What type of materials are you using or intent to use for building the following parts of your house?
- a) Foundation
 - b) Walls
 - c) Floors
 - d) Roofs
37. Do you wish to complete your house and live in it?
- a) Yes
 - b) No
38. If yes to question 35, Why have you not done so yet? (give reasons in order of importance).

39. When do you think you can possibly complete it?
- a) In less than a year
 - b) 2--3 yrs.
 - c) 3--5
 - d) Don't know, until the economy improves
 - e) Other specify Please
40. Where do you live at present?
- a) Own house
 - b) rented room & parlour
 - c) Family shared house
 - d) government low-cost quarters
41. How much rent did you pay every month (in Naira)?
42. How many habitable rooms do have in the house?
43. What type of Materials were used to build your house (also observe)?
44. What basic services do you have in the house?
- a) Electricity & pipe water
 - b) Electricity but well water
 - c) No electricity & no pipe water
45. What type of laterine do you use in your house?
- a) Traditional pit laterine
 - b) V.I.P. laterine
 - c) water system
 - d) no laterine at all
46. What are the major problems you currently experience with your housing condition?
- a) Lack of services
 - b) Lack of privacy
 - c) insecurity
 - d) Poor structure
 - e) insufficient space
 - f) Cost of rent is too high
 - g) other please specify
47. What do you think if any could be done to help you finish and move into your house faster?
48. What are the major benefits if any would you say you got from this project

APPENDIX iv

Questionnaires for the Officials of the World-Bank assisted Makama Project.

A. Personal Data

1. Name of the Official.....
2. Occupation.....
3. Responsibility held.....

B. Selection of Beneficiaries

4. Could you please state the minimum and maximum income brackets for the participants in this project?

- a. Minimum.....
- b. Maximum.....

5. What are the criteria you used in selection of beneficiaries?

- a.....
- b.....
- c.....
- d.....
- e.....

6. Do you have the records of all the plot allottees since the beginning of the project?
(collect register if available).

7. Have been monitoring the project beneficiaries?

8. If yes, are they the original allottees of the project?

9. Do you think the original allottees are being turned over?

.....

10. Could you please show me the most current plot allocation register.

C. House Design and building Materials standards

11. Did you set any minimum and maximum for building or materials for the housing units? if yes please specify what they are.

Size of the unit.....

Types of materials required for the following parts of the house

a. Foundation

b. Walls.....

c. Floors.....

d. Roofs.....

e. Finishing.....

12. Could you please explain how these standards were arrived at.

.....

.....

.....

13. Are the standards acceptable to the target beneficiaries?

.....

14. Are the standards affordable to the target beneficiaries?

If yes please explain how and if no state why.....

.....

.....

.....

.....

D. Consolidation of plots

15. Are you satisfied with the level of consolidation in the project?

.....

16. If no, what do think the problem is?

.....

.....

17. Did you provide any form of assistance to the plot allottees towards consolidating their plot?.....

18. If yes state the nature of assistance.....

.....

.....

E. Mortgage Loan

19. When did you start issueing the building materials loan.....

20. Could you please show me the register of loan bebneficairies showing the amounts of loan and dates issued?

21. What are the conditions for your loan qualification:

.....

.....

.....

22. Were the target groups able to meet these conditions?.yes/No

23. Were you able to give all beneficiaries the loan? Yes/No If no please could explain why not.....

.....

.....

F. Cost Recovery and Replicability

24. When did the loan repayment begin?.....

25. What is the situation of the repayment? Are there many people in areas?

.....

26. Do you still have plans to expand the project in other towns in the state?.....

27. In View of the cost recovery situation you have just explained, do you think the project is capable of replicating itself? explain why.....

.....

.....

Urban Development Project
World Bank Project Unit
P. M. B. 086
Bauchi.

Date: 15.7.88.19.86....

Area Manager
Federal Mortgage Bank of Nigeria
Yandoka Road
Bauchi.

Dear Sir

MAKAMA LOW COST HOUSING PROJECT
LETTER OF INTRODUCTION

It is hereby certified that: -----

is a plot beneficiary in Makama Project Sites and Services.
The beneficiary's Certificate of Occupancy is ready and has
been delivered to the Project Unit. Other necessary details
concerning the area are as follows:---

PLOT TYPE: A

PLOT COST: N 400,000

INCOME: 4,000

SAVING ACCOUNT: N 100,000 - 4

Copies of the approved building plan and the Certificate
of Occupancy are attached.

Thank you very much.

Yours faithfully

for: PROJECT MANAGER

Urban Development Project
World Bank Project
P.M. B. 086
Bauchi.

Date: 11/12/1987

Area Manager
Federal Mortgage Bank of Nigeria
Yandoka Road
Bauchi.

Dear Sir

MAKAMA LOW COST HOUSING PROJECT
LETTER OF INTRODUCTION

It is hereby certified that: ~~UMARU ATZUWA,~~

~~C/O STATE DEVELOPMENT BOARD,~~
~~BAUCHI STATE~~

is a plot beneficiary in Makama Project Sites and Services.
The beneficiary's Certificate of Occupancy is ready and has
been delivered to the Project Unit. Other necessary details
concerning the area are as follows:-

PLOT TYPE: (B)

PLOT COST: ₦1230:00

INCOME: ₦3000:00

SAVING ACCOUNT: 11-32-78434-1

Copies of the approved building plan and the Certificate
of occupancy are attached.

Thank you very much.

Yours faithfully

APPENDIX vii

Methods of Affordability calculations used for the World Bank projects

The accessibility of any project will depend very much on its affordability. The World Bank defined a certain level of services as being affordable if the amount of monthly income that a household is willing and able to pay for shelter related expenditure is enough to pay for the cost of providing the services. In most of the World Bank projects, this amount is assumed to lie between 15% and 30% of the household income. An equation ' $ay_i=c_j$ ', where a is the proportion of monthly income, c_j is the service level j and y_i is the monthly income of a household of income level i , was derived. Jimenez (1979) describes two most popularly used methods in assessing affordability. The first, is to examine the assumptions implied in the original estimates of the cost of projects, the proportion of their income they are able to devote to housing and estimate of the income itself to see if the assumptions made are valid or not. The second method is to monitor certain developments and indicators of affordability like population turnover, rate of defaults of payment of instalments etc. He recommends that both methods be used together for a better assessment. All the World Bank sponsored studies employed these methods in evaluating affordability of the projects to the target population.

Appendix Table 1

Level of Consolidation By Cluster

CLUSTER	STAGES OF PLOT DEVELOPMENT OF ALLOCATED PLOTS				
	Total No. of plots	No. Completed	Advanced stage	Foundation Stage	Undeveloped plots
S5	72	55	13	2	0
S9	88	51	22	3	4
S10	92	42	30	21	36
S11	129	70	12	12	8
S12	102	204	63	11	5
S13	229	8	6	5	3
S15	22	65	19	0	0
S17	84	40	5	1	2
S18	49	110	28	12	7
S19	159	123	18	9	0
S20	150	41	30	14	4
S21	97	132	18	2	8
S22	159	132	48	17	0
S25	201	114	25	9	6
S26	154	15	6	4	0
S27	25	41	29	18	44
S28	132	-	-	-	-
Total	1944	1243	372	139	127

Source: Field Survey, March 1992

Comments

Note that some of the clusters in the project site are included in the table. This is because they are newly demarcated and no work at all has been started. In some of them the plot allocation process was just starting. They are additional clusters mostly behind the city wall and the project boundary. The new clusters are meant for the higher income group and therefore, the plots are larger and more expensive. The project unit is still trying to convince the State Urban Development Board to extend essential services to the area.